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ABSTRACT

A consortium of Elliott , Rowan, and Morgan Counties (Kentucky) received a grant from the Kentucky Department of Education to demonstrate methods by which existing and future gifted and talented programs may be evaluated. A Multiattribute Utility Model was adopted, because the model avoids the pitfalls of an experimental method while providing decision makers with the information necessary to increase the impact these programs will have on gifted students and the community. The purpose of this project was to provide the basis by which continuous, systematic evaluation may become part of the Gifted and Talented Program. This method of program evaluation involves five steps: (1) identifying program goals; (2) weighting program goals; (3) soliciting prior estimates of goal attainment; (4) measuring goal attainment of evaluated goals, including identification, availability, adequacy of staffing, adequacy of evaluative structures, time on activities, counseling, cognitive objectives, affective objectives, creativity objectives, non-participant perceptions and accelerated course credits; and (5) computing the final utility. Five tables and seven figures summarize evaluation data from the three counties. This evaluation project is a step in establishing an ongoing evaluation program in these three counties. The significance of the project is limited if the participants fail to use these results as a stepping stone to an ongoing evaluation system. Fourteen appendices include the instruments used in the evaluation. (BAE)

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GIFTED AND TALENTED PROGRAM EVALUATION:

A MULTIATTRIBUTE UTILITY APPROACH

Evaluation Report for

Elliott County School Corporation

Morgan County School Corporation

Rowan County School Corporation

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December 30, 1985

Technical Report submitted to the Kentucky Department of Education from whom support was received for this research. Portions of this report were presented to the Society for Research in Child Development, Baltimore, April 24, 1987.

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Introduction

In October 1, 1984, the Kentucky Department of Education is ued a call for proposals for pilot projects which would demonstrate methods by which existing and future gifted and talented programs may be evaluated. A proposal was written and was submitted on November 9, 1984 by a consortium of Elliott, Rowan, and Morgan Counties. Notification of project approval was received in December, 1984. However, funds for the project were not available to the project director until March, 1985

The evaluation design chosen for the program was a multiattribute utility model (e.g., Edwards, Guttentag, & Snapper, 1975) because this model was considered better suited to the types of decisions made by those who would utilize the evaluation findings.

The most popular alternative to the multiattribute utility approach to program evaluation, an experimental design, was rejected for the following reasons.

1. The evaluation process began with a program which was already in place. Thus, the use of a control group was out of the question.

2. The unfairness of denying the program to a control group would have made an experimental design unattractive if not unethical.

3. Experimental designs often lack ecological validity (Renzulli & Smith, 1979).

4. The hypothesis test in experimental design compares the experimental hypothesis to an absurd hypothesis regarding the effects of a program, the null hypothesis. It is extremely unlikely that a gifted and talented program will have no effect on its participants whatsoever. Further, the hypothesis test does not reflect the types of decisions required by decision makers. Decision makers are interested in the value of the program relative to its cost. That is the sort of data program evaluators should provide.

5. Hypothesis testing is a one shot deal, in which summative results are intended to fully describe the character of the program. Programs change continuously. And when the results of an evaluation are reported, they probably become invalid very quickly because any competent program director will make changes to correct the programs faults.

The effectiveness of acceleration (Kulik & Kulik, 1984) and gifted programs (Kulik & Kulik, 1982) has already been established. It is more reasonable to provide a system of ongoing data collection regarding the effectiveness of the program in the accomplishment of its goals. It is essential that the system be one where the evaluation procedures evolve with the program.

Edwards, Guttentag, & Snapper (1975) suggest that we can take a lesson from the statistics used by the baseball statistician. Performance data should be gathered, compiled, and maintained on a continuous basis on the dimensions relevant to the decisions which are to be made. Then, decisions regarding ball players or programs may be made based upon an evaluation of their utility, weighing data on each dimension according the values of the persons being served; e.g., the teams owner or fans.

The baseball manager's decisions are generally (although apparently not always) intended to maximize a simple and obvious objective; winning. The objectives of Gifted and Talented Programs are far less clear. In designing an evaluation of social programs, we have to recognize that the most formidable task is often that of identifying the dimensions or values which are to be maximized as well as discovering the weights that should be assigned to those objectives.

A Multiattribute Utility Model was adopted for the evaluation of gifted and talented programs because it avoids the pitfalls of the experimental method while providing decision makers with the information necessary to increase the impact these programs will have on gifted students and the community. It was felt that by developing such a model, as well as a computer based system for compiling and maintaining data, this evaluation project would provide the method and materials to facilitate a process of continuous evaluation and data enlightened administrative decision making.

METHOD

The first point that should be made regarding this method of evaluation is that its significance in the context of a one shot evaluation is very limited. The purpose of this project is to provide the basis by which continuous systematic evaluation may become a part of the Gifted and Talented Program. To ensure that the complexities and time consumption associated with record keeping, data management, computations of weights and utilities, and the compiling and scoring of instruments does not stand in the way of integrating multiattribute utility program evaluation into Gifted and Talented Program decision making, MUCAPE (Multiattribute Utility Computer Assisted Program Evaluation) was developed in conjunction with this project. It allows the user to 1) enter and store goals, 2) enter values

used to compute weights for each goal and computes the weight for each goal, 3) allows the user to enter prior estimates of goal attainment and computes a weighted a priori estimate of goal attainment using these values, 4) allows the user to enter and maintain the values derived from objective assessments of goal attainment, 5) computes prior utilities which reflect a prediction of program value and final utilities which are a better estimate of program utility because they take in to account additional, less subjective data sources, and 6) produce and print a report which allows the program director to focus attention on goals that are most valued and/or least effectively attained. The manual for MUCAPE appears in Appendix A.

Substantial difficulty was encountered in collecting the information associated with the Gifted and Talented program evaluation. Some of this difficulty can be attributed to a difficult, stormy winter term coupled with the evaluation process occurring late in the spring session, a time at which the teacher's mind is more focused on completing the academic year than on new, innovative strategies for program improvement. However, certain social and political events resulted in additional obstacles. Substantial quantities of extra time and additional trips were required and some of the evaluation project is incomplete because of these problems. However, the model itself has been well developed and programs can easily add and update data to add to the precision of the computed final utility.

Step 1. <u>IDENTIFYING PROGRAM GOALS</u>

The first step in program evaluation must be to determine the dimensions or goals of the program that are to be evaluated. Goals and objectives that were identified for the gifted and talented program reflected two kinds of information. Expert opinions on the goals which should be evaluated were sought by reviewing the literature. This was followed by a systematic attempt to interview persons who are affected by the program and who are likely to hold varying perspectives regarding goals of the program.

We began by identifying goals evaluated in previous gifted program evaluations (Provus, 1972; Renzulli, 1975; Stake, 1967; Stufflebeam, 1970). Additionally, books and articles which discussed effective gifted and talented programing were reviewed (e.g., Gallagher, 1975; Renzulli & Smith, 1979). The initial list of goals appears in Appendix B.

Next, we identified a population of persons whose input into the goals to be evaluate was warranted. This step included attendance at parent group activities, teacher reviews and interviews, student interviews, parent interviews, and interviews with administrators and coordinators. Those who were considered more knowledgeable about gifted programs and/or were

difficult to access for an interview were given the list of goals for review and written comment. In retrospect, interviewing, although very time consuming, is by far the superior method for delineating the goals to be evaluated.

In the Elliott County Schools, 2 teachers and 3 administrators reviewed the preliminary list. Interviews were conducted with 14 students and 7 parents.

In the Morgan County Schools, 2 teachers and 2 administrators reviewed the preliminary list. Interviews were conducted with 35 students and 13 parents.

In the Rowan County Schools, 5 teachers and 2 administrators reviewed the preliminary list. Interviews were conducted with 56 students and 17 parents.

The attempt was then made to include as many of the new goals as possible. Many were rejected immediately because they were not truly goals for evaluation (e.g. How are we to develop consistent, valid, and fair identification procedures given state mandated quotas?). Others were subsumed within an existing category (e.g. intelligent behaviors was subsumed under cognitive objectives). Some goals were added (e.g., social skills development) while others were dropped or subsumed. The final set of evaluation objectives appears in Table 1a, 1b, 1c, along with the results of the entire evaluation.

Step 2. <u>WEIGHTING PROGRAM GOALS</u>

The next phase in the program evaluation requires the assignment of weights to each of the program goals. Parents, teachers, administrators, and students participated in the determination of weights for the program goals. Participants were invited to an after school session where refreshments, sandwiches, and snacks were first served. This was followed by a group project designed to consider what program goals would be weighed most heavily in this program evaluation.

This phase of the evaluation was completed using a two step process for evaluating the relative significance of entities. In the first step, goals are rank ordered in a group discussion with six to twelve participants. Generally, this meant dividing participants into two groups each facilitated by project personnel. After a general description of the purpose and utility of the program evaluation, the process of assigning weights was illustrated using a pizza buying decision making model (see Appendix C). This allowed us to illustrate the process by means of a concrete example. The group facilitator began the process by describing the entities to whom relative weights were to be assigned (e.g., amount of cheese, sauce, crust, price, additions). A possible discussion that might go with the pizza decision was illustrated for the group and

Table 1a

Elliot County Evaluation of Gifted and Talented Program
November 25 1985

Goal Title	weight	prior	evaluated
Identification	.148	56.6	58.3
achievement	.249	76	95
aptitude	.207	88	80
creativity	.119	37.5	25
attitudes	.172	37.5	42
special talents	.146	29	25
identified student effort	.106	41	40
Availability (across age etc.)	.05	65	81
Across age	1	65	81
Adequacy of Staffing	.127	24.8	24.6
attitudes about gifted	.151	74	73
knowledge about gifted	.258	5.8	-1
knowledge of subject matter	.299	26.6	-1
additional hours for preparation	.166	0	-1
person-hours from state funds	.126	33.2	-1
Adequacy of Evaluative Structures	.095	29.2	39.5
short range effects	.368	45	73
long range effects	.632	20	-1
Time on Activities	.095	8.8	7.9
accelerated traditional coursework	.083	16	5
gaining broader knowledge	.143	18	10
problem solving skills	.088	11.5	4
general creativity	.101	6.8	5
creative products	.081	5.5	7
developing effective attitudes	.156	5	8
cultural enrichment	.147	5	7
communications/social skills	.202	6.3	12
Counseling	.073	32.6	40.3
career & educational	.578	33.7	42
personal or social	.422	31.2	38
Parent Involvement	.056	35.3	49.7
Parent information	.474	65	35
Parent input	.526	8.6	63
Cognitive Objectives	.083	68.7	54
general achievement	.544	75	48
specific domain achievement	.456	61.2	-1
Affective Objectives	.106	67.8	35.9
attitudes toward schooling	.386	67.5	44
motivation	.328	68.3	28
self-evaluation	.287	67.5	34

Table 1a continued

Elliot County Evaluation of Gifted and Talented Program
November 25 1985

Goal Title	weight	prior	evaluated
Creativity Objectives	.068	45	45
general creativity	.588	45	-1
specific domain creativity	.412	45	-1
Non-participant Perceptions	.043	35.8	46.6
attitudes teachers not in G&T	.41	48.2	62
Prnts & Stdnts chose not G&T	.298	29.2	36
Prnts & Stdnts excluded from G&T	.292	25	36
Accelerated Course Credits	.057	10	0
Course credits	1	10	0

**********Prior Utility = 40.823066
**********Final Utility = 39.4060076
Average weight of Priors = 1
A -1 indicates that the value has not yet been measured

Table 1b

Morgan County Evaluation of Gifted and Talented Program
12/30/85

Goal Title	weight	prior	evaluated
Identification	.124	52.1	72.5
achievement	.189	75	95
aptitude	.196	98	85
creativity	.17	40	75
attitudes	.146	50	75
special talents	.164	20	25
identified student effort	.135	10	75
Availability (across age etc.)	.083	95	81
Across age	1	95	81
Adequacy of Staffing	.147	27.4	43.9
attitudes about gifted	.271	90	75
knowledge about gifted	.262	0	10
knowledge of subject matter	.174	0	85
additional hours for preparation	.141	0	17
person-hours from state funds	.152	20	25
Adequacy of Evaluative Structures	.054	0	47.8
short range effects	.388	0	84
long range effects	.612	0	25
Time on Activities	.115	4.9	17.7
accelerated traditional coursework	.117	6	20
gaining broader knowledge	.162	6	30
problem solving skills	.144	6	14
general creativity	.108	6	8
creative products	.102	3	7
developing effective attitudes	.099	3	27
cultural enrichment	.158	3	10
communications/social skills	.11	6	25
Counseling	.068	0	71.7
career & educational	.589	0	80
personal or social	.411	0	60
Parent Involvement	.057	24	55.2
Parent information	.481	50	61
Parent input	.519	0	50
Cognitive Objectives	.08	57.8	46.1
general achievement	.393	70	48
specific domain achievement	.607	50	45
Affective Objectives	.075	50	47.8
attitudes toward schooling	.262	50	40
motivation	.402	50	42
self-evaluation	.336	50	61

Table 1b continued

Morgan County Evaluation of Gifted and Talented Program
12/30/85

Goal Title	weight	prior	evaluated
Creativity Objectives	.081	50	50
general creativity	.403	50	-1
specific domain creativity	.597	50	-1
Non-participant Perceptions	.041	11.8	46.6
attitudes teachers not in G&T	.395	30	63
Prnts & Stdnts chose not G&T	.3	0	36
Prnts & Stdnts excluded from G&T	.305	0	36
Accelerated Course Credits	.075	0	0
Course credits	1	0	0

**********Prior Utility = 33.230867
**********Final Utility = 48.088499
Average weight of Priors = 1
A -1 indicates that the value has not yet been measured

Table 1c

Rowan County Evaluation of Gifted and Talented Program
12/30/85

Goal Title	weight	prior	evaluated
Identification	.135	54.9	63.1
achievement	.161	77.5	95
aptitude	.199	77.5	95
creativity	.168	35	25
attitudes	.196	25	65
special talents	.151	47.5	25
identified student effort	.126	72.5	65
Availability (across age etc.)	.102	35	35
Across age	1	35	-1
Adequacy of Staffing	.129	34.9	36.8
attitudes about gifted	.254	62.5	58
knowledge about gifted	.232	11.6	14
knowledge of subject matter	.219	53.3	75
additional hours for preparation	.196	0	0
person-hours from state funds	.099	47.5	25
Adequacy of Evaluative Structures	.048	65	58
short range effects	.501	90	76
long range effects	.499	40	-1
Time on Activities	.104	15.4	14.8
accelerated traditional coursework	.163	26.3	20
gaining broader knowledge	.164	30.3	21
problem solving skills	.138	17	12
general creativity	.108	7.3	12
creative products	.079	8.3	11
developing effective attitudes	.121	7	13
cultural enrichment	.08	6.6	12
communications/social skills	.146	6.6	12
Counseling	.067	65	41.8
career & educational	.52	67.5	50
personal or social	.48	62.5	33
Parent Involvement	.07	45.2	66.6
Parent information	.445	80	25
Parent input	.555	17.3	100
Cognitive Objectives	.082	76.4	64.9
general achievement	.522	80	58
specific domain achievement	.478	72.5	-1
Affective Objectives	.073	85.6	58.2
attitudes toward schooling	.277	85	51
motivation	.397	86.6	57
self-evaluation	.326	85	66

Table 1c continued

Rowan County Evaluation of Gifted and Talented Program
12/30/85

Goal Title	weight	prior	evaluated
Creativity Objectives	.079	40	40
general creativity	.468	40	-1
specific domain creativity	.532	40	-1
Non-participant Perceptions	.037	58.5	35.8
attitudes teachers not in G&T	.38	66.6	42
Prnts & Stdnts chose not G&T	.265	58.3	32
Prnts & Stdnts excluded from G&T	.355	50	32
Accelerated Course Credits	.076	20	0
Course credits	1	20	0

**********Prior Utility = 47.1219313
*********Final Utility = 42.702491
Average weight of Priors = 2.54054054
A -1 indicates that the value has not yet been measured

through this imaginary group discussion, the way in which each entity is rank ordered by the group was illustrated. Individuals then assigned the entities any rank order they wished.

The second step of the procedure is to individually assign relative importance ratings. To do this, the least significant entity is first assigned a rating of 10. Then the next to the least significant entity is considered relative to the least significant entity. How many times more important, if any, is the next to least important entity relative to the least important entity? The next to least significant entity is assigned the number, relative to the rating of ten, which preserves that ratio (e.g., if the next to least important was one and a half times as important, it would be assigned a rating of 15). Then the third least important entity is considered. It is assigned a rating relative to the least important entity, with review of its rating relative to the next to least important. Then the fourth least important is assigned a weight relative to the least, with review of its rating relative to the second and third least important, and so on for all entities to be rated. By the time the rater gets to the most important goal, many checks are performed and many revisions are likely to occur. Participants must be encouraged to consider their ratings carefully and make revisions as necessary.

The process of assigning ratings was illustrated using the pizza purchase decision. Participants were asked about their understanding of the process, questions were answered, and instructions were repeated as necessary. Then the process of evaluating the goals and subgoals associated with the Gifted and Talented Program Evaluation began. First, ratings were assigned to groupings of subgoals within each major goal. Thus, each subgoal was evaluated regarding its relative contribution to the major goal. In the process of discussing, ranking, and rating these subgoals, a clearer picture of the meaning of the major goals emerged for the participants. Thus, after subgoals subsumed under each major goal were rated, the process of ranking and rating each major goal was quite simple.

While the same set of goals will be utilized in each of the three counties, the relative weight of each goal is likely to vary from community to community. Thus, goal weights will be computed for each school district.

In Elliott County Schools, only eight people came to the goal weighting session. This included 3 students, 1 parent, 1 teacher, and 3 parent/teachers (parent of G&T student and a teacher). The attendance was less than ideal for the purposes of representing a broad range of values and opinions. While the data collected provides the best estimates of goal weighting for the Elliott County community, there is need to gather additional weightings in the future for increased confidence in the

accuracy of these ratings. Additional ratings can be combined with ratings already collected using the MUCAPE program, without interfering or affecting activities associated with other steps in the evaluation.

In Morgan County, 19 people attended the goal weighting session, although ratings from only 17 participants were usable. This included 8 students, 5 parents, 1 teacher, and 3 parent/teachers. Additional ratings should increase the consideration from teachers with fewer rankings from students who are participating in the gifted and talented programs.

In Rowan County, 19 people attended the goal rating session with usable ratings being produced by 18 participants. These 18 participants included 7 students, 6 parents, 3 teachers, and 2 parent/teachers.

Who belongs in these goal ratings sessions is a relevant issue. It would have been worthwhile to have principals, superintendents and even school board members in attendance. Invitations were extended to several but not all of these. Future efforts should include attempts to increase involvement from these groups.

Also, one might ask the place of expert advice in these goal weighting sessions. Perhaps, greater discussion from experts in gifted programming might lead to wiser value judgements than those that occurred. For example, the success of Gifted & Talented programs is probably contingent upon convincing the public and lawmakers of the worth of these programs. Yet the attitudes and values of non-G&T program participants was not weighted very heavily by the raters.

Importance ratings in terms of proportion were then computed for each goal and subgoal using MUCAPE. Note that the portions assigned to subgoals reflect the portion of the major goal to be determined by the value of that subgoal. Each rating is converted to a proportion by dividing the rating by the sum of the ratings within that group of goals. These portions are then averaged to give us the proportion assigned to each goal and subgoal.

The computed weightings for each goal and subgoal are presented in Table 1a, 1b, and 1c.

Step 3. <u>PRIOR ESTIMATES</u>

While the next step in the evaluation is the solicitation of prior estimates of goal attainment from those persons responsible for program implementation, this step cannot be completed effectively without consideration for the next step, assessment of goal attainment. When estimates of goal attainment are solicited, the better the description of

measurement instrumentation, the more fairly one can expect similar data from prior estimates and objective assessments. The instrument used to solicit prior estimates of goal attainment appears in Appendix D.

Prior estimates were then entered into the MUCAPE program. Although the program allows differential weighting of these estimates, all estimates were weighed equally.

At this phase of the project, cooperation from the Elliott County School system began to wane. No prior estimates were returned from Elliott County, although some of the measurement instruments in the next phase of the evaluation were administered.

From Morgan County, only one set of prior estimates were obtained. This occurred primarily because only one person felt sufficiently involved to effectively provide these prior estimates. However, this is less than ideal.

In Rowan County, four people completed prior estimates. However, one individual failed to complete some sections of the prior estimate form. Thus some prior estimates only reflect the estimates of three people.

Step 4. MEASURING GOAL ATTAINMENT

The investigators who proposed applying a multiattribute utility program evaluation model where not aware how little had been developed in the way of solid measurement instruments to evaluate the attainment of goals of gifted and talented programs. This investigation included the development and validation of several instruments as well as a variety of inference techniques for inferring goal attainment from methods used in the program. When devising these methods and measurements, the need to make them usable by the teacher and administrators without the necessity of regular assistance from project personnel was considered.

The goal of the measurement phase was to find an equivalent basis for locating each program on 0 to 100 scales. Whenever possible, this was interpreted in terms of proportion or probability.

In order to collect information necessary to make

This section is organized on the basis of the various major goals and subgoals that were evaluated.

Identification.
Zero to one hundred values were assigned to each identification dimension on the basis of the reliability of the measure being used. (Note: Some estimations where required on the part of the evaluators due to incompleteness of coordinator reports and/or a lack of data evaluating the instruments being used.) If no measure was used to assess an identification subgoal, a subjective and standard judgement about the relationship of measures used to that attribute or subgoal was applied. A worthwhile further step would be to study the interrelationships of identification measures to better understand the need for multitrait and multiple means assessments of Gifted and Talented attributes.

Availability. The form appearing in Appendix F was developed as a tool for inferring availability across age groups, etc. Inferences about availability were drawn from the report submitted for this evaluation as well as the report submitted by the school to the Kentucky Department of Education.

Adequacy of Staffing. Attitudes about the gifted were assessed using the Opinions on Giftedness Inventory. A sample along with reliability information appears in Appendix G. Cronbach's Alpha for the thirty item inventory based upon responses from 278 teachers and students was .81, suggesting that one's feeling about giftedness may reflect an internally consistent attribute. Data on attitudes about the gifted was compiled using a program entitled ATT. The manual for this program appears in Appendix H.

While responses can readily be entered into the ATT program by hand, it is often useful to be able to enter data using opscans (optical, pencil marked computer scanned answer sheets). This is especially true when these questionnaires are being administered to large numbers of students. In Appendix I, programs necessary for reorganizing and downloading data read using optical scan forms are described.

A survey was distributed to each staff member teaching in the gifted and talented program. A computer program and manual where designed to compile data from this instrument (survey and manual appear in Appendix J). From this survey and the accompanying Staff Training Report, the four remaining staff criteria were assessed.

The conversion of this data into 0-100 scales required some assumptions. It was assumed that an extremely effective training program in teaching the gifted student might include up to four courses dealing specifically with the gifted and talented, or some combination of courses and workshops totaling

about 150 hours. The selection of a somewhat arbitrary ceiling is a necessity for converting to a meaningful scale. Setting the ceiling too high will make even the best programs appear lacking. Setting the ceiling to low suggests that coursework beyond that level no longer increases the value of the gifted instructor. This compromise figure may warrant later debate when more programs offer certification in gifted and talented.

Preparation in subject matter was inferred from the degrees and college credits obtained by the teacher. One hundred percent prepared was considered to be the terminal degree in the person's field (Ph.D., Ed.D.). The authors are aware that this assumption is preposterous. However, it is the level beyond which additional degrees are unlikely to indicate that the individual is more prepared in their subject matter. Intermediate degree values were inferred based on their relative time and training requirements (B.A. - 50%, M.A. - 75%).

The allowance of extra time for preparation is absolutely crucial in a gifted and talented program because the very nature of giftedness requires that teachers continuously confront new teaching demands. It was assumed that in an ideal program, one would be allowed one hour of preparation for each hour with gifted students. Percent hours allowed for preparation is the proportion of hours allowed for preparation to total hours with gifted students.

The final piece of information to be pulled from this form is an attempt to estimate the number of man hours that are actually being generated by state grants. The grants awarded by the state of Kentucky specifically direct that a substantial portion of these funds be used for gifted program personnel. Presumably, these funds should increase the special programming and individualized, tailored instruction for gifted students. However, at the extreme, an administrator could do no more than ability group, placing the best students in a single class, and hire no additional teacher. Consequently, the state funds would actually only serve to reduce the school corporations expenses without actually increasing the amount of attention these students receive.

In an ideal program, the school corporation should compliment the state funding with man-hours beyond that which the grant money can buy. For the purposes of the present evaluation, a 100 means additional man-hours equivalent to one full time faculty member beyond those that would normally be employed by the school.

This information may be more accurately inferred directly from the administration of the school. It is suggested that this particular variable might be inferred directly in the future, rather than from reports from teachers.

Staff training reports should be collected from all teachers having a part in the gifted program. Unfortunately, many teachers failed to complete this survey and this would be a good target area for additional evaluation procedures.

Adequacy of Evaluative Structures. This evaluation report reflects an intensive effort at designing a comprehensive system of evaluation for the gifted and talented program. The extend to which the goals reported in this evaluation are being evaluated is the best indicator of the adequacy of the program evaluation. Thus, as this report becomes more complete, scores on this dimension will rise. A score was assigned to this dimension based upon the portion of all variance in this evaluation which is backed by objective assessments. Thus, this score reflects an objective evaluation of the cooperation and effort in each individual school in allowing and facilitating data collection.

Although their appears to be greater interest in the evaluation of long term effects than in short term effects, this interest was not reflected in the goals generated in the first phase of this study. This, coupled with the lack of evaluation of long range effects probably reflects a lack of conceptualization of what the long term effects are expected to be. Thus, this particular dimension appears to be doomed to the assignment of a 0 for measured attainment value.

Time on Activities. The best way to evaluate time on activities without large expenditures for observers is to have students and teachers maintain a log of daily activities. Because the teacher would easily be able to recall the activity, less error variance would occur due to differential recall. However, substantial variance would continue to occur due to differing opinions on what activities are designed to stimulate creativity, achievement, etc. A sample log was constructed for use in future evaluations (Appendix K).

Again, assumptions were required regarding a ceiling for the optimum program., It was assumed that an ideal program might balance the need for accelerated instruction with the need to function in the environment of average students, placing the students in an accelerated program 50% of the time. Hence, all time portions should be multiplied by two to form a 0-100 scale, with 100 reflecting the optimum program. Further analysis of the validity of this assumption is warranted.

Because this evaluation was to be completed in a very short time span, a less objective measure of time on activities was utilized. This evaluation reflected the subjective evaluation of students within the program. Because of the relatively subjective nature of the student interview, it is recommended that the judgements of time on activities by students be combined and equally weighted with prior estimates by teachers

and administrators to form the priors for subsequent evaluations. Then, student and teacher diaries can be used as the measure of goal attainment.

The student interview was used to assess time on activities and evaluate the quality of counseling. A computer program was written to aid in the calculation of averages and the formulation of a report. The manual and student interview form appear in Appendix L.

Counseling. The student interview form (Appendix L) has three questions pertaining to the category counseling. These pertain to career, educational and personal counseling. However, career counseling and educational counseling were lumped together in the goal weighting process. Based upon this interview, students apparently felt differently about the quality of educational counseling and career counseling. It may have been appropriate to distinguish these two in the weight assignment process and this should be considered in future evaluation efforts. In this evaluation, career and educational counseling were simply averaged. The SIAC program computed the portion of students who rated counseling quality as good or excellent, thus creating the 0-100 scale for the evaluation of counseling.

Parent Involvement. A representative list of 30 to 40 parents of gifted students in each school district was obtained from the program coordinator. The Gifted Student Parent Questionnaire (Appendix M) was sent to each set of parents, with answer sheets for both parents so that each parent could complete the questionnaire. The questionnaire on attitudes about giftedness and attitudes about schooling were also included, primarily for comparison and validation purposes.

Values for goal attainment were assigned based upon the portion of parents who both agreed with the positive statement and disagreed with the negative statement regarding the two dimensions, adequacy of parental information and opportunity for parental input.

Cognitive objectives. The extent of attainment in general achievement was evaluated based upon changes in standardized achievement test scores. The proportion of students who increased or remained constant in their achievement level were taken as the measure of accomplishment in the area of general achievement.

When viewing this statistic, the level of change that one might expect with no gifted programming should be considered. The naive observer might expect that without a program, as many would go up as would go down. However, this is not the case due to what is referred to as regression effects. If we observed children playing on a hill, noting how close they were to the

top, we might find that our observations were somewhat predictive of how high up the hill the same children would be the next time we looked. However, on the average, the ones near the top would be lower simply because they can only go up a little more yet they can go down a lot. Any time we select a group of people at the top or bottom, they are likely to be closer, on the average, to the middle the next time we observe them. Consequently, the portion of positive change to be expected given no program were in place is something less than 50 percent.

Further, much of the value of gifted and talented programming is meant to prevent backsliding by high achievers merely because the school isn't challenging. This would lead us to expect that the portion of students showing positive change would be much less than 50 percent if no program were available. However, without the availability of an appropriate control group (which as noted earlier, is both hard to find and logically problematic), it is difficult to draw precise conclusions about the effects of the program relative to no program and such interpretations should not be made. Instead, it is more valuable to consider the different effects of different programs.

Specific domain achievement was evaluated on the basis of forms completed by the program instructors estimating the portion of specific achievement attainment (Appendix N). There were two problems associated with this method. Some teachers included achievements that are better associated with general achievement rather than the attainment of specific achievements (e.g. basic programming, drama production, etc.). Secondly, the objectives of these specific domain activities were not sufficiently delineated such that the extent of goal attainment could be meaningfully evaluated in programs where specific achievement goals might differ. In the future, these goals should be delineated and evaluated for adequacy prior to the semester and assessed for attainment after the semester.

Affective objectives. Affective objectives were evaluated, for the most part, using the Dimensions of Self-concept inventory (DOSC) (Michael, Smith, & Michael, 1984) which is made up of five school related factors. Additionally, certain questions on the Student Questionnaire; Opinions on Giftedness asked students about attitudes and reasons for schooling.

The attitudes toward schooling subgoal was the average of the portion of positive student attitudes on the Opinions on Giftedness questionnaire and the percentile ranking of the average student score on Leadership and Initiative and the percentile rank for Identification and alienation. Each of these scales reflects attitudes regarding the purpose, value, and meaning of schooling.

The percentile ranking of the average score on the academic interest and satisfaction subscale was used to assess motivation. The percentile ranking of the average score on the level of aspiration subscale was taken as the measure of self-concept, since research has shown that level of aspiration and academic self-esteem are nearly synonymous.

Creativity objectives. General creativity assessment is very expensive and unreliable. Further, little emphasis was placed on stimulation of general creativity by any of the schools. No specific creativity objectives were presented to the evaluators in reports from the coordinator. Thus, the assessment of attainment of this goal did not appear to warrant the effort and expense.

Non-participant perceptions. Non-participant attitudes regarding G & T programming were assessed using the Opinions on Giftedness Survey (Appendix G) given to parents, students, and teachers both in and not involved with the gifted programs.

Accelerated course credits. It was apparent from meetings and reports that as the schools are now arranged, there is no potential for obtaining accelerated course credits. Hence, this goal was assigned a zero.

Step 5. COMPUTING THE FINAL UTILITY.

The prior and final utility for each school was computed using prior estimates to compute the prior utility and measured or evaluated locations in place of prior utilities when the subgoal had been evaluated. Within each major goal, goal attainment was computed in the following fashion. The measure of attainment for each major goal (u_i) is the sum of the products of the subgoal weights (w_i) and prior or final evaluated location (l_i) of each subgoal within that major goal.

$$u_i = \sum w_{ij} l_{ij}$$

The utility for the program (U) is the sum of the products of the major goal weights (W_i) times the measure of attainment for each goal (u_i).

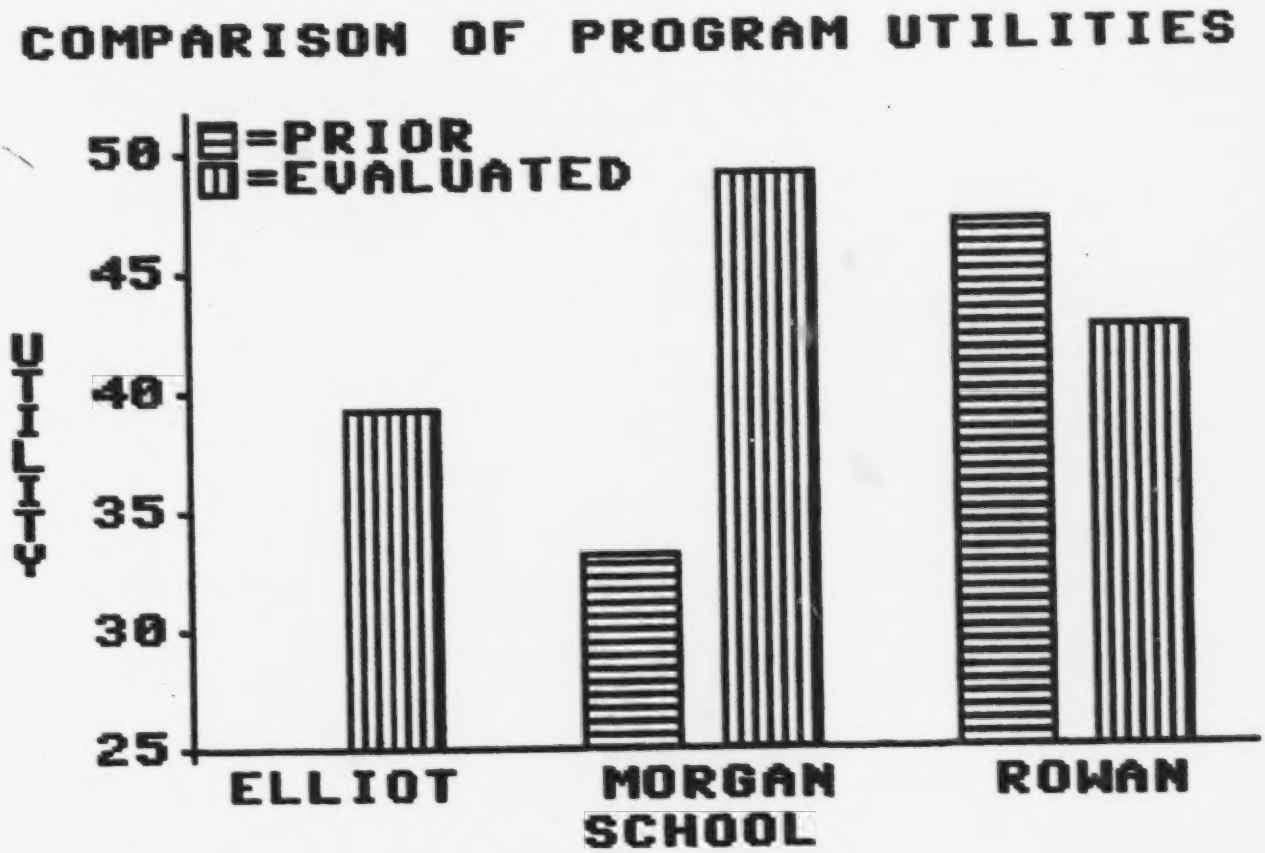
$$U = \sum W_i u_i$$

Summary of Results

The prior and final utilities for Gifted and Talented programs in the three schools are presented in Figure 1. Unfortunately, prior estimates for the Elliott County Gifted and Talented program were not returned to the project directors after several attempts to acquire these. As a consequence, no

prior program utility appears for the Elliott County Schools. Additionally, it was necessary to estimate priors on non-evaluated dimensions in order to complete the evaluated program utility. Thus, the meaningfulness of the global evaluation data is less useful for Elliott County.

Figure 1



The prior and evaluated program utilities for Morgan and Rowan counties reflect an interesting contrast. Apparently, the coordinator of the Morgan County Schools was less optimistic than the program warranted while the responding personnel at the Rowan County School were a bit too optimistic in there prior estimates of their programs attainment of goals. A brief comparison of goal attainment on several of the major goals may further explain these differences in global evaluation.

On the goal identification, Morgan County fared slightly better, u = 72.5, than Rowan County, u = 63.1. Weightings reflect an interest in selection based on a diverse set of attributes. The use of well designed instruments to measure the other gifted attributes would increase the utility value of this dimension for all three schools.

The schools obtained low marks in the staffing area (Table 2a, 2b). However, this in no way reflects upon the quality of the personnel per se. The staff were somewhat strong in their attitudes toward the gifted and preparation in their subject matter. The chief weakness is in the failure of the state to set standards and provide training with special emphasis on the gifted and a failure to utilize state and local funds to maximize opportunities for teachers to prepare, research and organize activities suited to the gifted. Obviously, if teaching the gifted is to be more than teaching the same things at a faster rate, teachers must have the opportunity and incentives to train and research the educational opportunities that should be available to gifted children. This need has apparently been neglected by both state and local officials.

Table 2

STAFF TRAINING REPORT
12/30/85
Based upon 1 teachers
Morgan County

%education: subject: 85
%trained G&T 150hrs= 100%: 10
%hours allowed for prep: 17
%which generates hours: 25

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courses G&T 0
credit hours G&T 0
workshops G&T 3
workshop hours G&T 15
courses 2 years G&T 0
credits 2 years G&T 0
wrkshps 2 years G&T 3
wrkshp hrs 2 years G&T 15
years teaching G&T 3
% teaching G&T 50
% additional hrs 50
% paid for wrkshps 100
% wrkshps in school hrs 100
hours with gifted 30
hours prep for gifted 10
hours prep in school 5

STAFF TRAINING REPORT
12/30/85
Based upon 3 teachers
Rowan County

%education: subject: 75
%trained G&T 150hrs= 100%: 14
%hours allowed for prep: 0
%which generates hours: 25

---

courses G&T .33
credit hours G&T 1
workshops G&T 1.66
workshop hours G&T 8
courses 2 years G&T 0
credits 2 years G&T 0
wrkshps 2 years G&T 1
wrkshp hrs 2 years G&T 4
years teaching G&T 1.66
% teaching G&T 27
% additional hrs 17
% paid for wrkshps 100
% wrkshps in school hrs 100
hours with gifted 3.66
hours prep for gifted 4.33
hours prep in school 0

In the area of Gifted and Talented counseling, Morgan County prior estimates were somewhat irrationally pessimistic, u = 0. However, students rated the quality of counseling very highly, u = 71.7. On the other hand, Rowan County priors were more favorable, u = 65, than the ratings given by students, u = 41.8. Findings are summarized from the Student Interview on Activities and Counseling in Table 3a, 3b, 3c.

Table 3a

STUDENT INTERVIEW ON ACTIVITIES AND COUNSELING(SIAC)
9/16/85
Elliot County
number of interviews 13

%total	16
%accelerated traditional x 2	5
%broader knowledge x 2	10
%problem solving x 2	4
%general creativity x 2	5
%creative products x 2	7
%effective attitudes x 2	8
%cultural enrichment x 2	7
%communication/social x 2	12
% rating counseling good or excellent	
vocational & career	46
educational	38
social and personal	38

MEAN RATINGS FOR COUNSELING
1 = excellent, 5 = very inadequate)
vocational & career 3.07692308
educational 2.92307692
social and personal 2.61538462

Table 3b

STUDENT INTERVIEW ON ACTIVITIES AND COUNSELING(SIAC)
9/13/85
Morgan County
number of interviews 10

%total	25
%accelerated traditional x 2	20
%broader knowledge x 2	30
%problem solving x 2	14
%general creativity x 2	8
%creative products x 2	7
%effective attitudes x 2	27
%cultural enrichment x 2	10
%communication/social x 2	25
% rating counseling good or excellent	
vocational & career	80
educational	80
social and personal	60

MEAN RATINGS FOR COUNSELING
1 = excellent, 5 = very inadequate)
vocational & career 2.3
educational 2
social and personal 2.4

Table 3c

STUDENT INTERVIEW ON ACTIVITIES AND COUNSELING(SIAC)
8/12/85
number of interviews 67
Rowan County

%total x 2	50
%accelerated traditional x 2	20
%broader knowledge x 2	21
%problem solving x 2	12
%general creativity x 2	12
%creative products x 2	11
%effective attitudes x 2	13
%cultural enrichment x 2	12
%communication/social x 2	12
% rating counseling good or excellent	
vocational & career	33
educational	58
social and personal	33

MEAN RATINGS FOR COUNSELING
1 = excellent, 5 = very inadequate)
vocational & career 3.07462686
educational 2.46268656
social and personal 3.05970149

There were differences in ratings from parents which probably reflect activities specifically designed to involve parents. Rowan County activities included both a parent's organization and the planned handbook for parents and gifted students. They received the highest rating, u = 66.6. Morgan County's coordinator has, less successfully, attempted to solicit such involvement from parents and their middle score, u = 55.2, is probably a function of that effort. Parent data is summarized in Tables 4a, 4b, 4c, and 4d.

Table 4a

PARENT INPUT AND INFORMATION REPORT
November 6 1985
Elliot County
Number of parents responding: 20

% of positive feelings regarding adequacy of;

parent information	34.95
parent input	62.5

Mean responses, 1 = strongly agree

Well informed	2.8
input opportunity	2
resistance to input	2.7
information inadequate	2.5

Table 4b

PARENT INPUT AND INFORMATION REPORT
November 6 1985
Morgan County
Number of parents responding: 19

% of positive feelings regarding adequacy of;

parent information	60.5
parent input	50

Mean responses, 1 = strongly agree

Well informed	2.4
input opportunity	2.6
resistance to input	3.1
information inadequate	3.1

Table 4c

PARENT INPUT AND INFORMATION REPORT
November 6 1985
Rowan County
Number of parents responding: 6

% of positive feelings regarding adequacy of;

parent information	25
parent input	100

Mean responses, 1 = strongly agree

Well informed	3
input opportunity	1.5
resistance to input	4.6
information inadequate	1.8

Table 4d

PARENT INPUT AND INFORMATION REPORT
November 6 1985
Elliot Morgan and Rowan Combined
Number of parents responding: 45

% of positive feelings regarding adequacy of;

parent information	43.3
parent input	61.1

Mean responses, 1 = strongly agree

Well informed	2.7
input opportunity	2.2
resistance to input	3.2
information inadequate	2.6

Attainment of cognitive objectives favored Rowan County, u = 64.9. This was best supported in the area of general achievement and probably reflected the Rowan County High School's emphasis on acceleration of general achievement through more advanced but traditional courses.

However, the failure of Rowan and Elliott County to correctly complete forms associated with specific domain achievement may indicate that they lack programmatic efforts in specialized achievement (e.g., computer skills, drama, etc.). Also, the one form that was returned from Rowan County specified achievement in math and science which are general achievement areas evaluated under general achievement. Hence, it seems probable that prior estimates utilized in the absence of evaluation may have overestimated the extent of specific domain achievement, thus inflating the utility assigned to Elliott and Rowan Counties, relative to Morgan County.

The assessment of affective objectives prompted a number of interesting statistical comparisons. On a global level Rowan County student affective responses were more positive, u = 58.2, than affective responses from Morgan County, u = 47.8, which were more positive than affective responses from Elliott County, u = 35.9. General findings on attitudes toward giftedness are reported in Table 5a, 5b, 5c and 5d.

Table 5a

ATTITUDES TOWARD THE GIFTED & PROGRAMS FOR GIFTED (ATT)
10/12/85
Elliot County

# of students	85
% positive attitudes toward G&T	36.43
mean attitude score	88.65
% positive attitudes on success	52.6
mean success attitude score	23.24
% pos attitudes on school purpose	35.88
mean school purpose score	11.45
# of gifted students	32
% positive attitudes toward G&T	46.25
mean attitude score	96.56
% positive attitudes on success	56.69
mean success attitude score	23.9
% pos attitudes on school purpose	38.28
mean school purpose score	11.68
# of parents	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0
# of parents of gifted	20
% positive attitudes toward G&T	40
mean attitude score	86.59
% positive attitudes on success	2.14
mean success attitude score	20.04
% pos attitudes on school purpose	0
mean school purpose score	12
# of teachers	15
% positive attitudes toward G&T	62.44
mean attitude score	108.06
% positive attitudes on success	60
mean success attitude score	24
% pos attitudes on school purpose	41.66
mean school purpose score	12.39
# of teachers of gifted	1
% positive attitudes toward G&T	73.33
mean attitude score	116
% positive attitudes on success	42.85
mean success attitude score	21
% pos attitudes on school purpose	100
mean school purpose score	16
miscellaneous or other	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0

Table 5b

ATTITUDES TOWARD THE GIFTED & PROGRAMS FOR GIFTED (ATT)
10/17/85
Morgan County

# of students	11
% positive attitudes toward G&T	36.36
mean attitude score	94.09
% positive attitudes on success	48.05
mean success attitude score	24.18
% pos attitudes on school purpose	34.09
mean school purpose score	12
# of gifted students	9
% positive attitudes toward G&T	52.96
mean attitude score	104.22
% positive attitudes on success	50.79
mean success attitude score	23.88
% pos attitudes on school purpose	44.44
mean school purpose score	12.33
# of parents	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0
# of parents of gifted	18
% positive attitudes toward G&T	61.11
mean attitude score	110.38
% positive attitudes on success	2.38
mean success attitude score	20.55
% pos attitudes on school purpose	0
mean school purpose score	12
# of teachers	7
% positive attitudes toward G&T	63.33
mean attitude score	106.85
% positive attitudes on success	51.02
mean success attitude score	22.14
% pos attitudes on school purpose	57.14
mean school purpose score	12.85
# of teachers of gifted	2
% positive attitudes toward G&T	75
mean attitude score	122.5
% positive attitudes on success	64.28
mean success attitude score	26.5
% pos attitudes on school purpose	37.5
mean school purpose score	13.5
miscellaneous or other	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0

Table 5c

ATTITUDES TOWARD THE GIFTED & PROGRAMS FOR GIFTED (ATT)
10/7/85
Rowan County

# of students	43
% positive attitudes toward G&T	31.47
mean attitude score	89.2
% positive attitudes on success	44.51
mean success attitude score	22.39
% pos attitudes on school purpose	26.74
mean school purpose score	11.25
# of gifted students	66
% positive attitudes toward G&T	54.14
mean attitude score	104.53
% positive attitudes on success	54.97
mean success attitude score	24.03
% pos attitudes on school purpose	30.68
mean school purpose score	11.68
# of parents	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0
# of parents of gifted	6
% positive attitudes toward G&T	47.77
mean attitude score	92.33
% positive attitudes on success	9.52
mean success attitude score	21.16
% pos attitudes on school purpose	0
mean school purpose score	12
# of teachers	5
% positive attitudes toward G&T	42
mean attitude score	89.8
% positive attitudes on success	34.28
mean success attitude score	22.2
% pos attitudes on school purpose	45
mean school purpose score	13.39
# of teachers of gifted	3
% positive attitudes toward G&T	57.77
mean attitude score	108
% positive attitudes on success	47.61
mean success attitude score	22
% pos attitudes on school purpose	58.33
mean school purpose score	15
miscellaneous or other	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0

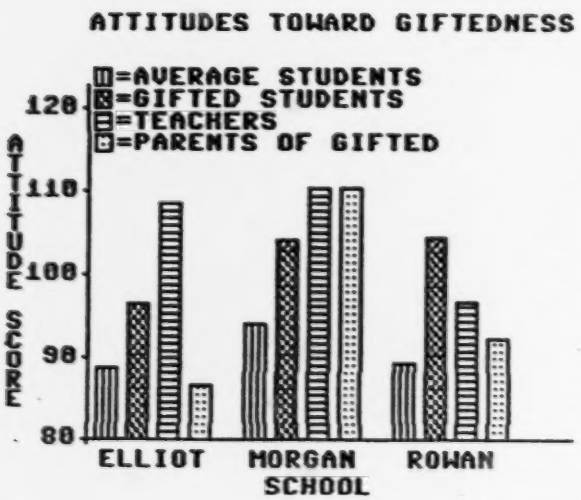
Table 5d

ATTITUDES TOWARD THE GIFTED & PROGRAMS FOR GIFTED (ATT)
10/17/85
Elliot Morgan & Rowan Counties Combined

# of students	139
% positive attitudes toward G&T	34.89
mean attitude score	89.25
% positive attitudes on success	49.74
mean success attitude score	23.05
% pos attitudes on school purpose	32.91
mean school purpose score	11.43
# of gifted students	107
% positive attitudes toward G&T	51.68
mean attitude score	102.12
% positive attitudes on success	55.14
mean success attitude score	23.98
% pos attitudes on school purpose	34.11
mean school purpose score	11.73
# of parents	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0
# of parents of gifted	44
% positive attitudes toward G&T	49.69
mean attitude score	97.11
% positive attitudes on success	3.24
mean success attitude score	20.4
% pos attitudes on school purpose	0
mean school purpose score	12
# of teachers	27
% positive attitudes toward G&T	58.88
mean attitude score	104.37
% positive attitudes on success	52.91
mean success attitude score	23.18
% pos attitudes on school purpose	46.29
mean school purpose score	12.7
# of teachers of gifted	6
% positive attitudes toward G&T	66.11
mean attitude score	114.16
% positive attitudes on success	52.38
mean success attitude score	23.33
% pos attitudes on school purpose	58.33
mean school purpose score	14.66
miscellaneous or other	0
% positive attitudes toward G&T	0
mean attitude score	0
% positive attitudes on success	0
mean success attitude score	0
% pos attitudes on school purpose	0
mean school purpose score	0

For the opinions on giftedness questionnaire, data was collected for parents, teachers, and average students as well as the gifted students. Findings are charted in Figure 2. The results were analyzed via a 4 X 3 (group by school) analysis of variance. There was a significant main effect effect for school, $F(2,311) = 14.31$, $p < .001$, with Morgan County opinions, $m = 105.38$, more favorable than Rowan County opinions, $m = 98.07$ which were more favorable than Elliott County Opinions, $m = 92.12$. There was a significant main effect for group, $F(3,311) = 25.88$, $p < .001$ and an interaction between group and school, $F(6,311) = 5.05$, $p < .001$, indicating that group differences in attitudes toward gifted programs varied by school. Notable points of interest include markedly less favorable opinions on giftedness from the parents of gifted children in Elliott County, and somewhat less favorable opinions about giftedness from teachers in Rowan County.

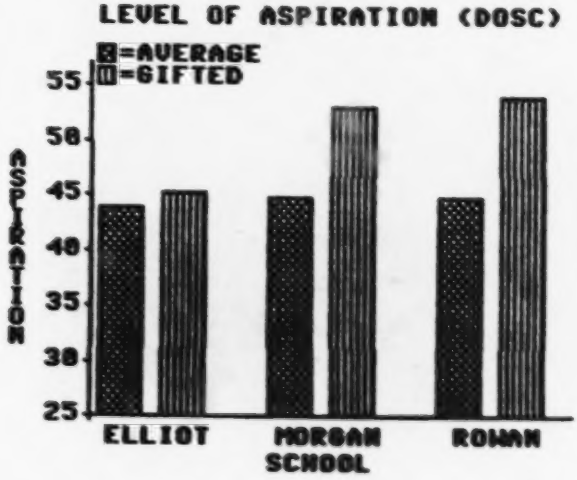
Figure 2



Although only three scales of the Dimensions of Self Concept (DOSC) inventory's five scales were actually used in the evaluation, all five scales will be discussed because they show significant differences among schools and between gifted and average children.

The Level of Aspiration subscale of the DOSC was used as the measure of self-evaluation because theorists in this area see these variables as nearly equivalent. This data is charted in Figure 3. Gifted children had higher levels of aspiration than did average children, $F(1,240) = 13.88$, $p < .001$ and level of aspiration was related to school, $F(2,240) = 3.44$, $p < .05$. There was a significant interaction between school and giftedness, $F(2,240) = 3.10$, $p < .05$ which appeared to indicate that differences between gifted and non-gifted children occurred only in Morgan and Rowan Counties. The overall average score, $m = 47.37$ indicated lower levels of aspiration than that previously found in city populations, $m = 49.6$.

Figure 3

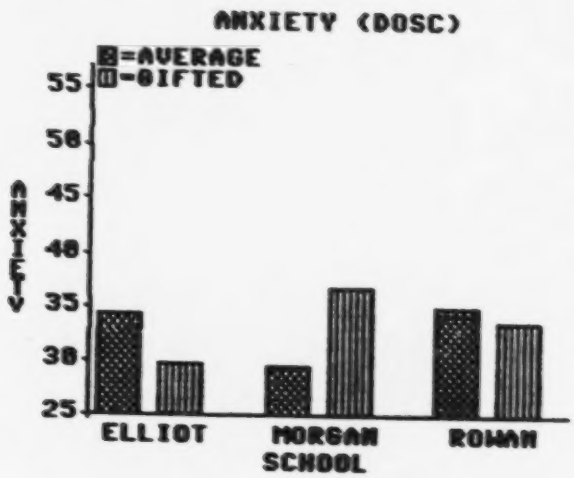


Level of anxiety was not used as a variable in this compilation of final utility. Its results are plotted in Figure 4. While there were no main effects, there was a significant interaction between school and giftedness, $F(2,240) = 3.73$, $p < .05$. It is a bit difficult to interpret this graph without some evaluation of the significance of anxiety. Research has generally indicated that performance is optimized by moderate levels of anxiety. Low anxiety follows from little concern for performance while high anxiety may result in performance inhibiting activities; e.g. worry, freezing up, etc. On the average, anxiety levels in the three counties, $m = 33.5$ were less than previous norming samples, $m = 35.7$.

One might argue that, given that gifted students are adequately challenged, there anxiety levels should be about the same as average students. Given that their levels of aspiration are higher than those of average students, and the fact that overall anxiety levels were lower than the previous norming sample, anxiety levels slightly higher than those of the average student might be indicative of a program which challenges the gifted child. However, this is likely to be true only of moderately inflated anxiety levels.

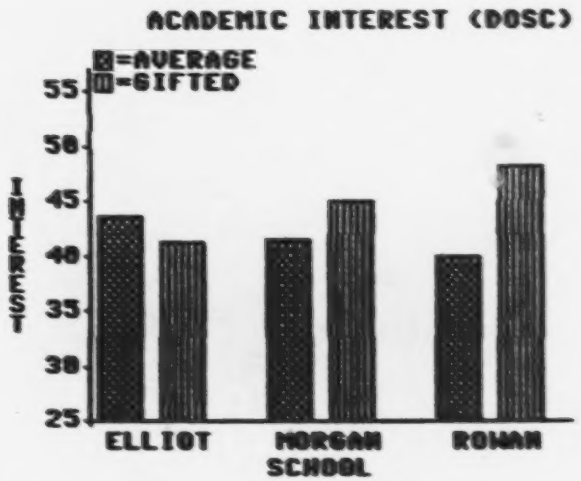
If the anxiety levels of gifted students is substantially below that of the average student, this could indicate that the gifted program is failing to provide meaningful challenges to the gifted and talented student.

Figure 4



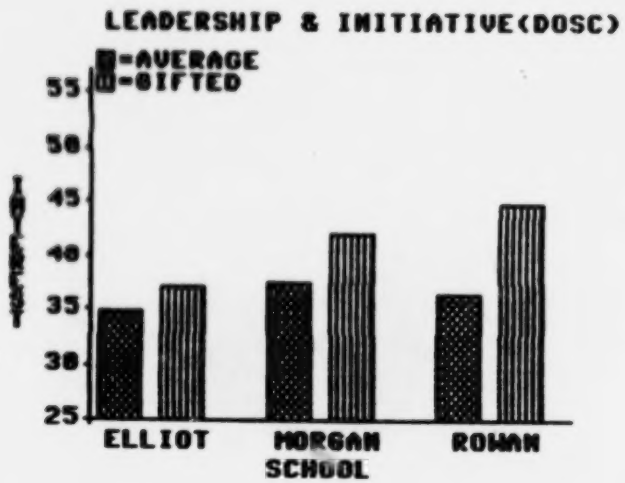
Academic Interest and Satisfaction was the subscale used to assess motivation. The data is charted in Figure 5. In general, gifted children showed greater academic interest than average students, $F(1,240) = 6.09$, $p < .01$. This academic interested interacted with school, $F(2,240) = 6.91$, $p < .001$. While gifted children in Rowan and Morgan Counties showed higher than average levels of academic interest, gifted student in Elliott County showed less academic interest than average students. Overall, students showed less academic interest, $m = 43.9$, than students previously sampled, $m = 46.1$.

Figure 5



The Leadership and Initiative subscale was not used in the computation of final utility. However, it may reflect a significant variable to be considered in a later update of this evaluation process. This data is charted in Figure 6. Gifted children scored higher in leadership than average students, $F(1,240) = 17.86$, $p < .001$. Differences between schools were significant, $F(2,240) = 5.05$, $p < .01$. The interaction between school and giftedness was marginal, $F(2,240) = 2.56$, $p = .08$, suggesting that differences between gifted student leadership scores and those of average students were lowest in Elliott County and greatest in Rowan County. As with the other variables, leadership scores, $m = 38.5$, were somewhat lower than those found in previous samples, $m = 41.1$.

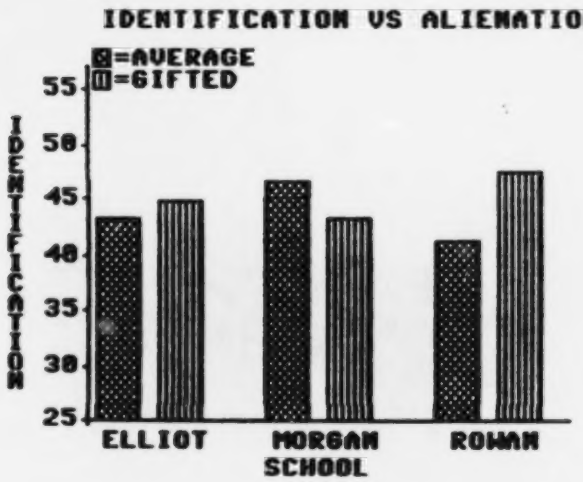
Figure 6



Taken together, these last four findings each point to the same thing. The level of challenge and programming presented to gifted and talented students in Elliott County is not sufficient to distinguish those students from average students on dimensions relevant to giftedness; i.e., level of aspiration, leadership, and academic interest.

The subscale, Identification vs. Alienation reflects the students attitudes toward the schooling process. This scale was used in combination with a questionnaire specifically designed for this evaluation to assess students attitudes toward schooling in the final program evaluation. The data from this variable are presented in Figure 7. In general, gifted students felt a more positive identification with the academic community than did average students, $F(1,240) = 7.20$, $p < .01$. However, this interacted with school, $F(2,240) = 3.09$, $p < .05$.

Figure 7



Unlike the other two counties, Morgan County gifted students identified less with the academic community than did average students. This could reflect some alienation being experienced by certain teachers in the gifted program at the time of the evaluation or it could be a more lasting problem. Either way, this finding warrants some attention in Morgan County.

Discussion

This evaluation project reflects an important step in the establishing an ongoing evaluation program in these three counties. The most important steps in establishing the evaluation system have now been tested and established. The programs now know what is to be evaluated and the relative significance of those things which are to be evaluated.

However, the significance of this evaluation project is quit limited if counties fail to use these results as a stepping stone to an ongoing evaluation system. Several factors limit the significance of this evaluation if not used as an ongoing, continuous system of evaluation.

1. Some measures were not assessed due to limits primarily in time, and to a lesser extent, resources.

2. Several subgoals were assessed by means less adequate than preferred measures due to the limited time frame for evaluation.

3. Significant portions of the evaluation were marginally completed, or completed with less data that preferred due to difficulty in getting maximum cooperation. Full cooperation is always a sensitive issue in evaluation, because inevitably, evaluation will find some faults in any program. When evaluation is an ongoing process supervised by the program coordinator or school administrator, greater cooperation can be expected.

4. Schools and programs are in a constant state of flux. Already there is reason to believe that a portion of the data collected in this evaluation is obsolete.

It is hoped that the availability of computer software for the purpose of evaluating these programs while encourage program coordinators to adopt and maintain this sort of evaluation. We are quite aware that program evaluation is generally not the most rewarding activity for teachers of gifted. However, this report found weaknesses in each program worthy of the attention of the program coordinator. Thus, the utility of program evaluation can be high.

Each year, the coordinator can collect new data on aspects of the program most likely to have changed or that have not been evaluated recently. Thus, the evaluation system will evolve with the program.

References

Edwards, W., Guttentag, M., & Snapper, K. (1975) A decision-theoretic approach to evaluation research. In E. L. Struening & M. Guttentag (Eds.) Handbook of evaluation research. Beverly Hills, CA: Sage Publications.

Gallagher, J. J. (1975) Teaching the gifted child. Boston: Allyn & Bacon.

Kulik, C.C., & Kulik, J.A. (1982) Effects of ability grouping on secondary school students: A meta-analysis of evaluation findings. American Education Research Journal, 19, 415-428.

Kulik, J. A., & Kulik, C. C. (1984) Effects of accelerated instruction on students. Review of Education Research, 54, 409-425.

Provis, M. (1972) Evaluation of ongoing programs in public school systems. In R.W. Tyler (Ed.), Education evaluation: New roles, new means. The Sixty-eighth Yearbook of the National Society for the Study of Education, Part II. Chicago: NSSE.

Renzulli, J. S. (1975) A guidebook for evaluating programs for the gifted and talented. Ventura, CA: Office of the Ventura County Superintendent of Schools.

Renzulli, J. S., & Smith (1979) Issues and procedures in evaluating programs. In A. H. Passow (Ed.) The gifted and talented: Their education and development. Chicago: University of Chicago Press.

Stakes, R. E. (1967) The countenance of education evaluation. Teacher's College Record, 68, 523-540.

Stufflebeam, D. L., Foley, W.J., Gephart, W. J., Guba, E. G., Hammond, R. L., Merriman, H. O., & Provus, M. M. (1970) Education evaluation and decision-making. Itasca, Illinois, Peacock, 1971.

APPENDIX A

MUCAPE MANUAL

MULTIATTRIBUTE UTILITY
COMPUTER ASSISTED
PROGRAM EVALUATION

by

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MUCAPE is a computer program designed to facilitate record keeping, compilation, and reporting of the results of a multiattribute utility program evaluation. It is designed to teach the user about program evaluation while assisting in the various phases of evaluation.

Multiattribute utility program evaluation reflects a particular philosophy about the purposes of program evaluation. The alternative, the experimental design, tests the hypothesis that the effects of a program are greater than zero or greater than some alternate course of action. Of course, the likelihood that a program will have no impact whatsoever is almost nil. Unfortunately, hypothesis testing generally fails to answer the decision maker's most important questions. Is the program worth what it costs? What kinds of changes will improve the program?

Additionally, hypothesis testing is a one shot deal, where summative results are intended to fully describe the character of the program. Programs change continuously. And when the results of the evaluation are reported, they presumably become invalid very quickly, simply because any program director of moderate competence is likely to initiate actions directed at the program's weaknesses.

A multiattribute utility model for program evaluation offers these benefits;

1. Programs are evaluated in terms of their value or utility, not in terms of the hypothesis test, thereby providing better information to the decision maker.

2. Like most program evaluations, a substantial amount of effort is directed toward the identification of the goals of the program which are to be subsequently assessed and evaluated. However, rather than weighting these goals based upon a multivariate analysis that maximizes statistical significance, these goals are weighted based upon the values of the constituency served by the program.

3. The program evaluation identifies those areas most in need of attention, thus providing some direction to program improvement.

4. The evaluation process is formative in nature, allowing the program director to make changes in the program and evaluate those changes without completely reevaluating the program.

In the following pages Multiattribute Utility Program Evaluation will be described as it would be applied using MUCAPE.

EQUIPMENT

Commodore 64 computer
1541 Disk Drive or equivalent
Monitor
Printer (CBM 1525 or most other printers)

LOADING MUCAPE

Data Disks: Before loading the program, it is useful to format a disk for storing the data you will enter. It is generally not wise to store data on the program disk. Consult your disk manual for instructions for formating a disk. Carefully label the disk using a felt tip pen so that you will be able to recognize it easily.

Loading MUCAPE: Carefully insert the disk into the 1541 disk drive being careful not to touch the exposed magnetic surface of the disk. The program is loaded by typing;

```
LOAD "0:*",8
```

Then press return. When the cursor reappears (after about one minute) you are ready to run the program. Type;

```
RUN
```

Then press return.

Insert Data Disk: When the title screen appears, remove the program disk and insert your data disk. Then press the space bar and the main menu will appear.

MAIN MENU

The Main Menu reflects the four major steps in multiattribute program evaluation, as well as the options to print reports and store the data which you have entered.

Screen Colors: To change the border color, press the letter b until the desired color appears. To change the background color, press B (capital b) until the desired color appears. To change the color of the characters, press c until the desired character color appears.

F1. INPUT GOALS OR REVISION MENU:

The first step in a program evaluation is the identification of the goals and values which the program is intended to maximize. This requires that one; a) identify the constituency or population for whom the program holds value, or relative to whose values decisions are to be made, b) formulate a foundation with which to help those individuals conceptualize the goals or entities of value, and c) catalog, refine, combine, and organize a workable set of goals and subgoals to be evaluated. When you select this option, the goals which will be evaluated should already have been identified.

By pressing the function key <F1>, you select the option which allows you to input the goals and subgoals you have identified. Since you have not yet entered any goals, the computer makes the assumption that you will now enter the titles of the goals of the program which are to be evaluated.

Note that there are two types of goals in this program; major goals and subgoals. You are allowed up to a total of 20 major goals and 60 subgoals within all major goals combined. Subgoals are the components or entities being evaluated that, taken together, comprise the major goal.

You are now prompted to enter each major goal which can be no more than 35 characters long. Do not use commas or colons because the computer takes these symbols as data separators for character data. Enter a title and then press return. When the last major goal is entered, enter just the letter F and press return.

The computer will now prompt for subgoals within each major goal. Enter these subgoals in the same way as you entered the major goals. Each major goal must have at least one subgoal which reflects that which is measured in order to evaluate that goal. Enter the letter F when you have finished entering subgoals under a particular major goal. You will then be prompted to enter subgoals for the next major goal.

When subgoals have been entered for all of the major goals, you are asked if you would like to modify these goals. If you select y, or press <F1> from the main menu after goals have already been entered, the GOAL REVISION MENU will appear.

GOAL REVISION MENU:

F1 Add a major goal. This option prompts for a major goal, followed by a routine for entering subgoals for this major goal.

F2 Add a subgoal. By using the up/down cursor, the user selects the goal to which a subgoal is to be added, then simply enters the new subgoal.

F3 Revise a major goal. Use the up/down cursor to select the goal to be revised, press <F7> and then simply enter the new goal.

F4 Revise a subgoal. Use the up/down cursor to select the major goal within which a subgoal is to be modified and the subgoal which is to be modified. Press <F7> and enter the new subgoal.

F2. INPUT GOAL WEIGHTS:

It is recommended that goal weights be established as follows. Identify a group of people who can fairly be said to represent the constituency served by the program and/or program evaluation. Gather them in groups of 8 to 12. The group leader must be familiar with and be able to explain the goals and subgoals that have been identified. The group process begins with a discussion of the rank ordering of importance of the subgoals within the first major goal.

After the group members have had the opportunity to share their views and the issues have been addressed and considered, each individual will assign a rating to each subgoal by the following method. The goal the person believes is least important is assigned a rating of 10. The second to the least important goal is assigned a score based upon its significance relative to the least important goal (e.g., a 15 is one and one half times as important). Then the third from the least important is assigned a score based on its significance relative to the least important and next to least important goal. As one progresses to the more important goals, it is important to carefully consider each of these subgoals in terms of their importance relative to each of the lesser subgoals. After all of the subgoals within a goal have been considered, one is ready to proceed to the next major goals, ranking and rating the subgoals within that major goal.

When all of the subgoals have been assigned ratings, we are ready to rank order and score the major goals. This is done in exactly the same way that the subgoals were ranked and rated.

At this point, the evaluator will have collected data from a variety of individuals which includes ratings for each major goal and subgoal. The more sets of ratings from varied individuals, the more likely it is that weightings will represent the true feelings of those affected by the program being evaluated.

Now, all this data must be compiled. This is what MUCAPE is designed to do. Using the Input Goal Weights option, you will enter each set of ratings. The computer will transform those ratings into portions so that the weights of subgoals within each major goal will sum to 1.0, and the sum of the weights of all the major goals will be 1.0. Additionally, MUCAPE allows the user to enter and add sets of ratings to ratings that have been previously entered.

Entering weights into the computer. To begin entering weights from the main menu, press <F2>. The computer will ask if you wish to store raw data. Storing raw data creates a data file which is a record of each set of weights. This data file could be useful for research or analysis of trends. The format of this data file is presented in Appendix B. The main evaluation record merely stores the compiled weighting and the number of data sets entered. This is the only information necessary for the evaluation itself.

If weights have been entered previously, new ratings will be average in with the old weights. If you want to begin the weighting process over again without consideration for preexisting weights, simply load a MUCAPE file with goals only (see Load & Store Data option).

From the record of one individual's ratings begin recording entries. Enter any letter code you choose to use to classify your raters. Unless you intend to store the raw data for later use, it makes no difference what letter you enter. You will be prompted by each major goal, in response to which you must enter the individuals rating (which ranges from 10 on up). After ratings are entered for each major goal, each goal and rating is printed one the screen and you are asked to recheck your ratings.

Check each entry carefully. You will not be able to correct errors after you enter y

Then enter ratings for subgoals within each major goal. Each time you are prompted "Is this right", check your entries very carefully. You will not be able to correct errant entries easily at a later time because these entries will be averaged into other entries.

If you have a printer attached to your computer and turned on, a hard copy listing of your entries will be printed for later consideration and correction of errant entries. However, correcting errant entries after confirming that they were correct requires some more elaborate mathematical operations. These are described in Appendix B.

When all sets of ratings have been entered, enter F as the letter code for the next rating set and you will return to the menu.

F3. INPUT PRIOR LOCATIONS:

Prior estimates of location on a goal related continuum are useful in evaluation research for several reasons. First of all, it necessitates a critical consideration of the extent to which the program administrators believe they are accomplishing goals consistent with the expectations of those who have provided the goals and their weightings. Often, an initial evaluation may go no farther than this, because this alone provides substantial input for subjective program evaluation and improvement or a foundation for the design of a new program. From these prior estimates a prior program utility can be calculated. This would tell use whether the program has worth even if objective assessment lives up to the expectations of those providing the estimates. It is often beneficial to allow the program director to use this data to reestablish priorities and modify the program, with more objective evaluation to follow these modifications.

Prior estimates are also useful because they require use to face the discrepancies between our expectations and the more objectives assessments that follow. All programs have there faults. However, purely post hoc reactions to a program evaluation often lead to the reaction, "Well, what did you expect". Prior estimates often allow us to avoid this.

Prior estimates are of even greater utility when used in combination with probabilities as our 0-100 scale and Bayesian statistical procedures. Rather than formulating posterior estimates solely on the basis of measurements, Bayesian procedures allow us to adjust our apriori estimates on the basis of observation and measurement. Our obseravtions may be held with high or low confidence and the extent to which these observations affect the translation from apriori to posterior estimates varies according. Sources which offer more comprehensive consideration of the use of Bayesian statistics in multiattribute utility evaluation (Edwards, Guttentag, & Snapper, 1975) and the use of Bayesian statistical inference (Iverson, 1984) are reference in the reference section of this manual.

When prior estimates are obtained, one must first identify those individuals most capable of providing estimates of attainment for each subgoal. At times this may be one set of individuals estimating all of the subgoals or different individuals providing estimates of different subgoals depending upon their experience with each subgoal.

It is best to gather prior estimates by providing a brief description of the goals and their assessment. Then the estimator can provide their estimate of location on the dimension being considered.

When you have gathered these estimates, press <F3> from the main menu to begin entering priors. The computer will proceed through each subgoal, asking for prior estimates. The computer will ask you to confirm the weight given to preexisting priors and the prior being entered. If you assign a zero to the preexisting priors, you will be disregarding all previously entered priors. If you enter a zero for the "weight relative to above", no entry will be computed for this individual's estimates. Thus, your entry for prior estimate would be irrelevant if the weight assigned were zero.

Generally, your response would be to simply press return for number of previous estimates, return for weight relative to above, and then enter the next prior estimate. Continue to do this through each subgoal and then proceed to the next set of estimates until all priors have been entered. After each set of priors, you will be asked whether you would like to return to the menu or go on to add another set of estimates.

F4. INPUT/MODIFY GOAL LOCATIONS:

When you press <F4>, the first major goal and its first subgoal appears. Use the space bace to move through the goals until the goal you wish to change appears. Press <F7> to make a change, enter the new value, and press return. When you have made all the changes you wish to make, press <F5> to return to the menu.

Note that a value of -1 designates a missing value. When a value is missing, the prior estimate is substituted in the computation of final utility.

F5. LOAD & STORE ON DISK DRIVE: Once the goals have been input, you will want to store and load them using your disk drive. Press <F5> and the LOAD, STORE, & RESTART MENU appears.

LOAD, STORE, & RESTART MENU

F1. Load MUCAPE file. Pressing <F1> loads all goals, weights, prior estimates, and measured locations that mave been stored in a given evaluation record. You will be asked for the programs file name. The user should be careful to store files using names that fit the evaluation project and will thus be easy to recall.

F2. Load goals & weights only. Pressing <F2> allows us to move back to step two at times when a new evaluation project is to begin where previously designated priors and goal location assessments no longer are useful.

F3. Load goals only. In new evaluation projects, one may wish to start with previously identified goals, make additions and modifications, and assess weights and values in the new environment. Thus it is useful to be able to load the goals without any other information whatsoever.

F4. Store MUCAPE file. If any name was used previously in storing and loading, you will be asked whether you want the program given the same name. If not, you will be asked to provide a name for the file. This name should be no longer than 16 characters and should reflect a title that can be easily recalled for loading. You will be asked to verify your desire to replace a file whenever a store operation will overwrite a file. This is simply to insure that you don't accidently write over another file of the same name.

F5. Initialize program for a new file. Before loading a new file, all other records should be cleared by selecting this option. This option will allow you to switch from one data set to another without exiting the program.

F7. COMPUTE UTILITY & PRINT MENU:

This option is selected when we want to compute utilities and produce listings of the goals and subgoals.

PRINTER/SCREEN OUTPUT MENU

F1. Screen print utilities. Computes the prior and final program utilities by first summing weights times subgoal locations as estimates of major goal locations, then summing weights times major goal locations. The end product is a score ranging between 100 for the perfect program and zero for a completely ineffective program.

When measured goal locations are not available, the computer utilizes prior estimates in computing final utilities. Thus, the prior and final utilities will become increasingly differentiated as more objective assessments replace subjective values.

F2. Printer print ultilities. Same as screen print utilities but lists the utilities on the printer.

F3. Printer list with all goals. Lists each major goal with subgoals, and the weight, prior estimates, and measured locations for each. (see Appendix C)

F4. Printer list with only major goals. This produces a shorter list with the weight, prior estimate, and measured location for each major goal. (see Appendix C)

F8. FINISHED:

You are prompted to verify that you have stored that which you wish to save. If records are changed and not stored, they will be lost.

APPENDIX B

LIST OF PROGRAM GOALS

Goal Identification

We are currently in the process of conducting a fairly extensive evaluation of gifted and talented programs is several Eastern Kentucky schools. The initial step in such an evaluation is to identify the goals of the gifted program as a basis for this evaluation. We began this step by reviewing other evaluation programs and literature on the gifted and talented. From this, we composed the listing you see below. Before we proceed, we want a variety of people who have legitimate concern about quality in gifted and talented programs to review this listing and propose additional goals, clarify goals, or suggest that goals now on the list not be considered. In this way, we can come as close as possible to a mutually agreed upon purpose for this evaluation program.

Please take some time to review the list you see below. Then, write your modification right on the listing or on the back of this sheet of paper. Please ask questions about anything on the list which is unclear to you.

Initial list of dimensions to be evaluated

ANTECEDANTS

Identification (reliability and validity)
- probability that a gifted child will be rejected
- probability that a non-gifted child will be accepted
- portion of theoretical construct of gifted being assessed
- availability of programs to all gifted (across age groups, location of home).

Organization/Leadership
- adequacy of communication and coordination

Staff training
- selection process
- general knowledge
- college credits
- workshops
- other (attitudes)

Adequacy of evaluative structures.
- short range effects
- long range effects

TRANSACTIONS

Activities
- quantity; adequacy of time commitment to program
- planning; adequacy of syllabus for gifted curriculum
- time effectiveness of curriculum

OUTCOMES

Cognitive Objectives
- level of objectives (knowledge, synthesis, etc.)
- general achievement
- specific domain achievement
  - value of specific domain objectives

Affective objectives
- attitudes regarding value of knowledge
- attitudes toward schooling
- motivation
- self-evaluation

Creativity Objectives
- Extent to which creativity is actually a part of the curriculum
- general creativity
- specific creativity

Perception of non-participants
- attitudes of teachers not teaching the gifted and talented
- attitudes of parents and students who chose not to participate
- attitude of parents and students excluded from participation

APPENDIX C

GOAL WEIGHING FORM

Goal Ranking

I. ANTECEDANTS

___ ___ IDENTIFICATION (reliability and validity)

- ___ ___ achievement
- ___ ___ aptitude
- ___ ___ creativity
- ___ ___ attitudes
- ___ ___ special talents
- ___ ___ identified student effort

___ ___ AVAILABLITY ACROSS AGE, S.E.S., etc.

___ ___ ADEQUACY OF STAFFING

- ___ ___ attitudes about gifted
- ___ ___ knowledge about gifted
- ___ ___ knowledge about subject matter
- ___ ___ Additional hours for preparation
- ___ ___ Additional person hours generated from state funds

___ ___ ADEQUACY OF EVALUATIVE STRUCTURES.

- ___ ___ short range effects
- ___ ___ long range effects

II. TRANSACTIONS

___ ___ TIME ON:

- ___ ___ accelerating traditional coursework
- ___ ___ gaining broader knowledge
- ___ ___ problem solving skills
- ___ ___ general creativity
- ___ ___ creative products
- ___ ___ developing effective attitudes
- ___ ___ cultural enrichment
- ___ ___ communication skills/social skills

___ ___ COUNSELING

- ___ ___ vocational, career, & educational
- ___ ___ personal and/or social

___ ___ PARENT INVOLVEMENT

- ___ ___ Parent information
- ___ ___ Parent input

III. OUTCOMES

___ ___ COGNITIVE OBJECTIVES

- ___ ___ general achievement
- ___ ___ specific domain achievement(e.g. computer skills, French)

___ ___ AFFECTIVE OBJECTIVES

- ___ ___ attitudes toward schooling
- ___ ___ motivation
- ___ ___ self-evaluation (especially about being gifted)

___ ___ CREATIVITY OBJECTIVES

- ___ ___ general creativity
- ___ ___ specific creativity

___ ___ PERCEPTION OF NON-PARTICIPANTS

- ___ ___ attitudes of teachers not teaching the gifted and talented
- ___ ___ attitudes of parents and students who chose not to participate
- ___ ___ attitude of parents and students excluded from participation

___ ___ ACCELERATED COURSE CREDITS

SAMPLE WEIGHTING

FOODS

___ ___ PIZZA
- ___ ___ Sauce
- ___ ___ Cheese
- ___ ___ Crust
- ___ ___ Additions
- ___ ___ Price

PROCEDURE

1: Discuss rank order of items in the subgroup.

2: Assign a rank to each item IN COLUMN 1(1 is most important, 2 is second, etc.)

3: Assign a weight of 10 to the item of least importance IN COLUMN 2.

4: Weight the 2nd least important (IN COLUMN 2)in terms of its importance relative to the least important (15 = one and a half times as important).

5: Weight the 3rd least important relative to the least important, comparing it to the 2nd most important to insure that item importances relative to each other are consistent with your expectations.

6: Do this with each item until all items in a subcategory are weighted relative to each of the other items in the subcategory.

Goal Ranking: MAJOR CATEGORIES

___ ___ IDENTIFICATION (reliability and validity)

___ ___ AVAILABLITY ACROSS AGE, S.E.S., etc.

___ ___ ADEQUACY OF STAFFING

___ ___ ADEQUACY OF EVALUATIVE STRUCTURES.

___ ___ AMOUNT OF TIME ON GIFTED ACTIVITIES:

___ ___ COUNSELING

___ ___ PARENT INVOLVEMENT

___ ___ COGNITIVE OBJECTIVES

___ ___ AFFECTIVE OBJECTIVES

___ ___ CREATIVITY OBJECTIVES

___ ___ PERCEPTION OF NON-PARTICIPANTS

___ ___ ACCELERATED COURSE CREDITS

APPENDIX D

PRIOR ESTIMATES OF GOAL ATTAINMENT FORM

PRIOR ESTIMATES OF GOAL ATTAINMENT

IDENTIFICATION: For each of the following, estimate the percentage of students identified as gifted who are actually in the top five percent on each dimension. Note that portions should be higher in those categories you use for identification. Keep in mind, however, that we are talking about achievement, not achievement test performance, etc. Identification measures are not perfectly accurate and we can rarely expect 100% accuracy.

_____ achievement

_____ aptitude

_____ creativity

_____ attitudes

_____ special talents

_____ identified student effort

AVAILABILITY ACROSS AGE, S.E.S., : Estimate the percentage of gifted children in your entire county who are able to participate fully in gifted programs._____

STAFFING: With regard to faculty participating in G&T programs;

On the average, what percentage of their attitudes about gifted are positive(see opinion questions)._____

If full (or ideal) training in gifted required five courses or equivalent to start plus an additional 18 hours of training, workshops, etc. per year to keep current, what percent prepared, on the average, are the staff in your gifted and talented program._____

Given that a Ph.D. is the terminal degree in most subjects, (implying 100% training in that subject matter, M.S. = 75%, B.S. = 50%, etc.), what percentage of training in subject matter characterizes the staff in your gifted and talented program. _____

If an ideal program allowed one hour of preparation for each hour of contact with gifted students, what <u>percentage</u> of this time in additional preparation time for gifted classes are you allowed._____

State funding for gifted programs is intended to create addition person-hours for gifted and talented programs. What percentage of these funds designated for personel actually generates hours of teacher activity that would not have occurred in the absence of this funding._____

EVALUATION

_____ percentage of short range objectives & outcomes assessed

_____ percentage of long range outcomes assessed

ACTIVITIES

____ Percentage of total school time in gifted programs.

Percentage of time in gifted programming which focuses upon;*

____ accelerating traditional coursework

____ gaining broader knowledge

____ problem solving skills

____ general creativity

____ creative products

____ developing effective attitudes

____ cultural enrichment

____ communication skills/social skills

* note total will be greater than 100 since some activities focus on more than one.

COUNSELING

Portion of students who will feel they received high quality counseling in these areas.

____ vocational, career, & educational

____ personal and/or social

PARENT INVOLVEMENT

____ Percentage of information that may be of interest to parents that is communicated to them.

____ Percentage of parents who have had input into the G&T program such that it actually influences something about the child's education.

COGNITIVE OBJECTIVES

____ Percentage showing a greater than one year gain in general achievement over a one year period.

____ Percentage mastering a specific domain of achievement(e.g. computer skills, French)

AFFECTIVE OBJECTIVES

____ Average percentile (based on norms) on attitudes toward schooling

____ Average percentile (based on national norms)on aspirations and motivation

____ Average percentile (based on national norms) on self-concept inventory.

CREATIVITY OBJECTIVES

____ Percentage showing a greater than one year gain in general creativity over a one year period.

____ Percentage having generated a specific creative product in a gifted program evaluated to be beyond the talents of 80% of average students.

PERCEPTION OF NON-PARTICIPANTS

____ percentage of positive attitudes of teachers not teaching the gifted and talented

____ percentage of positive attitudes of parents and students who chose not to participate

____ percentage of positive attitude of parents and students excluded from participation.

ACCELERATED COURSE CREDITS: What percentage of students in the G&T program receive accelerated course credits (credit for courses they would have to take at a later time in school or in college).____

APPENDIX E

COORDINATOR'S REPORT REQUIREMENTS

Program Report Requirements

Identification

1. For each measure used
   a. briefly describe the measurement instrument. provide a sample of the instrument if possible
   b. reliability, validity statistics.
   c. reference for instrument.
   d. describe what the measure was intended to assess. (achievement, aptitude, creativity, special talents)

2. Describe the method by which these measures are combined, weighted, etc. and particpants are chosen.

Evaluation

1. Describe instruments, provide samples, reliability data, and provide references.
2. Describe how evaluation is compiled and used.
3. Describe and differentiate long and short term evaluation.

Time on activities

1. Report the percentage of total school time students generally spend on special activities for Gifted and Talented.

2. Describe activities.

   a. Description of activity.
   b. What percentage of all G&T students participated
   c. What percentage of the total program for those students did this activity represent.
   d. What percentage of this activity was focused on;*

      ____ accelerating traditional coursework.
      ____ gaining broader knowledge
      ____ problem solving skills
      ____ general creativity
      ____ specific creative products
      ____ developing effective attitudes
      ____ cultural enrichment
      ____ communication/social skills
      *total may be greater than 100% since many activities have dual purposes

Counseling

1. Describe any additional activities and resources for vocational, educational, and career counseling beyond that which is traditionally provided to all students

2. Describe any activities and/or special counselor preparation for dealing with personal problems unique or more common among gifted and talented students.

Parent Involvement

1. Describe information materials, organization of meetings, etc. designed to keep parents informed regarding special G&T activities for their children.

2. Describe mechanisms by which parents can contribute and have input to the G&T program.

Outcomes

1. Describe specific domains (e.g. computer skills, language skills, creative projects like plays, art, etc.) where achievement should be assessed from your program.
   a. Blueprint or outline the achievemnt.
   b. Describe the population of students benefiting from this outcome.
   c. What percentage of the overall G&T population does this group represent.

APPENDIX F

AVAILABILITY TO ALL STUDENTS

EVALUATION FORM

Availability Analysis Worksheet

GRADE	% IDENTIFIED	% ABLE	% TOTAL PROG	NET PORTION
K				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

SUM OF ALL PORTIONS _____

Divide by 13 for AVERAGE PORTION _____

% Identified is the portion of the upper 5% of all students based upon identification measures who are designated or identified as gifted.

% Able is the portion of those identified students who are able to participate. Here we are looking for the portion as reduced by obstacles to participation (e.g., lack of transportation, conflict with other activities, etc.)

% Total Program. It is unlikely that programs will be equally comprehensive at all grade levels. First, assign the grade level that has the most comprehensive program a 100. The assign a portion to each grade level relative to the most comprehensive program.

APPENDIX G

TEACHER ATTITUDES ON GIFTEDNESS SURVEY

QUESTIONNAIRE INSTRUCTIONS

For teachers

PLEASE READ THIS CAREFULLY

1. Do not write on the questionnaires. All responses should be placed on the attached answer sheet.

2. Please use one of the pencils provided for you, since the amount of lead from the pencil is an important part of accurate scoring.

3. Carefully darken in your response completely. Notice that many questions go from strongly agree to strongly disagree, where 1 is agree and 5 is disagree or never to always where 1 is never and 5 is always. Be sure you understand how to record your answers on the answer sheet before you begin.

4. Enter your last name, then leave a space, and then your first name. Darken in the circles spelling your name, filling in the blank between your last and first name.

5. Enter your sex, grade level, and date of birth (dropping the 19 from your year of birth) and darken in the corresponding circles.

6. If you are a teacher in the gifted program, darken in the 0 under the first column(column A) of identification number. If you are not, darken in the number 9.

7. If you are not sure about what you are supposed to do, PLEASE ASK!!

TEACHER QUESTIONNARE
OPINIONS ON GIFTEDNESS

SA = strongly agree, A = agree somewhat, ? = not sure if I agree or disagree, D = disagree somewhat, SD = strongly disagree.

1 2 3 4 5

SA A ? D SD 1. It is alright to have after school programs for gifted students, but these students should not be released from their regular classroom responsibilities.

SA A ? D SD 2. The mind that can produce a quick answer to almost every question may yet need training toward self-criticism and rethinking of first impulses.

SA A ? D SD 3. Suppression of intellectual controversy and unresolved differences of opinion in the classroom is the responsibility of the teacher.

SA A ? D SD 4. It is appropriate to spend substantial amounts of additional money to provide special educational experiences for gifted and talented students.

SA A ? D SD 5. It is not fair that gifted children are offered special educational opportunities merely because of their high intelligence and achievement.

SA A ? D SD 6. High intelligence is a characteristic which interferes with common sense.

SA A ? D SD 7. I would prefer that my own children be very mentally gifted.

SA A ? D SD 8. It isn't fair not to require certain assignments of gifted children merely because achievement tests indicate they have already mastered the content.

SA A ? D SD 9. Teachers should have students write papers on topics that are chosen by the teacher.

SA A ? D SD 10. Very bright children are usually impractical.

SA A ? D SD 11. Superior intellectual ability commonly leads to emotional instability.

SA A ? D SD 12. Gifted and talented programs should be funded in the same manner that funds are allocated to handicapped learners.

SA A ? D SD 13. Special programs for the gifted are necessary to prevent the restriction of the gifted child's learning process.

SA A ? D SD 14. Creativity in children should be encouraged, even though it may be at the expense of classroom order and discipline at times.

SA A ? D SD 15. For the most part, gifted students merely need to get more of what average students are learning.

1 2 3 4 5

SA A ? D SD 16. It is undemocratic to provide gifted children with educational situations which differ from those of the regular school program.

SA A ? D SD 17. Very intelligent children are generally less friendly and warm than other children.

SA A ? D SD 18. I would rather have children who are athletically gifted than mentally gifted.

SA A ? D SD 19. The gifted can develop their potential in a conventional program; special programs should focus on those who need help in mastering the basics.

SA A ? D SD 20. I believe a teacher should not give a student credit for an answer which was a correct response to the test question, but was not the answer the teacher was seeking based upon what had been taught.

SA A ? D SD 21. Intellectually gifted children are generally less happy than average children.

SA A ? D SD 22. A teacher should try to get all students to solve math problems by the same method, even if the student's own method works.

SA A ? D SD 23. Children frequently appear to be gifted because they develop one capability at the expense of another.

SA A ? D SD 24. Gifted children, on the average, are superior in physical, emotional, and social adjustment.

SA A ? D SD 25. Gifted children should always remain with their chronological age group for the sake of emotional adjustment.

SA A ? D SD 26. If it's good for the gifted, it's good for all.

SA A ? D SD 27. Gifted students are frequently more motivated to learn than average students.

SA A ? D SD 28. Gifted students are often responsible for feelings of inadequacy among average students.

SA A ? D SD 29. The money that taxpayers pay for special programs for the gifted will be returned in the impact well educated, gifted individuals have on society.

SA A ? D SD 30. When a gifted student tries to tell the class how a concept in one class is almost the same as a similar concept in another class, the teacher should stop the student in order to prevent confusion in the class.

SA A ? D SD 31. Students succeed if they act as if they like the teacher.

SA A ? D SD 32. Students succeed if they know how to impress the right people.

SA A ? D SD 33. Students succeed if they know how to take tests.

SA A ? D SD 34. Students succeed if they work really hard.

SA A ? D SD 35. Students succeed if they are intelligent or talented.

SA A ? D SD 36. Students succeed if they are interested in learning.

SA A ? D SD 37. Students succeed if they have the opportunity to attend an excellent school system.

SA A ? D SD 38. It is very important for schools to prepare us for jobs that will give us a comfortable living.

SA A ? D SD 39. It is very important for schools to prepare us for jobs that will give us long vacations and money to travel.

SA A ? D SD 40. It is very important for schools to prepare use for jobs that will give us plenty of free time.

SA A ? D SD 41. It is very important for schools to give us the skills that will get us top jobs with high status.

SA A ? D SD 42. Paddling is frequently the most efficient way of correcting student misbehavior.

SA A ? D SD 43. It is desirable to require pupils to sit in assigned seats during assemblies.

SA A ? D SD 44. Pupils are usually not capable of solving their problems through logical reasoning.

SA A ? D SD 45. Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique.

SA A ? D SD 46. Beginning teachers are not likely to maintain strict enough control over their pupils.

SA A ? D SD 47. Teachers should consider revision of their teaching methods if these are criticized by their pupils.

SA A ? D SD 48. The best principals give unquestioning support to teachers in disciplining pupils.

SA A ? D SD 49. Pupils should not be permitted to contradict the statements of the teacher in class.

SA A ? D SD 50. It is justifiable to have pupils learn many facts about a subject even if they have no immediate application.

SA A ? D SD 51. Too much pupil time is spent on guidance and activities and too little on academic preparation.

SA A ? D SD 52. Being friendly with pupils often leads them to become too familiar.

SA A ? D SD 53. It is more important for pupils to learn to obey the rules than that they make their own decisions.

SA A ? D SD 54. Student governments are a good "safety valve" but should not have much influence on school policy.

SA A ? D SD 55. Pupils can be trusted to work together without supervision.

SA A ? D SD 56. If a pupil uses obscene or profane language in school, it must be considered a moral offense.

SA A ? D SD 57. If pupils are allowed to use the lavatory without getting permission, this privilege will be abused.

SA A ? D SD 58. A few pupils are just young hoodlums and should be treated accordingly.

SA A ? D SD 59. It is often necessary to remind pupils that their status in the school differs from that of the teachers.

SA A ? D SD 60. A pupil who destroy school material or property should be severely punished.

SA A ? D SD 61. Pupils cannot perceive the difference between democracy and anarchy in the classroom.

SA A ? D SD 62. Pupils often misbehave in order to make the teacher look bad.

SA A ? D SD 63. Corporal punishment is useful in reminding students of their place in the school.

APPENDIX H

ATTITUDES ON GIFTEDNESS AND SCHOOLING

DATA ENTRY AND COMPILATION PROGRAM

GIFTED AND TALENTED PROGRAM

ATTITTUDES TOWARD GIFTEDNESS AND

SCHOOLING DATA ENTRY AND EVALUATION

This program was designed to be an exceedingly simple approach to compiling data gathered using the Gifted and Talented Program Survey of Attitudes Toward Giftedness and Schooling.

To load this program, type;

```
LOAD"ATT",8
```

When the cursor appears, type;

```
RUN
```

When you press the space bar, the main menu will appear. As with the MUCAPE program, you may now change the screen border by pressing the letter b, the screen background by pressing capital B, and the character color by pressing c.

1. LOAD A DATA SET ALREADY ENTERED. If you have already entered data or you have created files downloaded from opscans, you would press <F1>. You are then prompted for the name of the file you wish to load. It is important to note that this program automatically adds "-att" to the title of any data stored on the disk. When you want to load this data, the computer will add "-att" to whatever you enter. This decreases the likelihood that files from one program will be confused with files from another program.

Combining files. After a data set is entered or loaded, you may append a second (or third and so on) file to this data. After pressing <F1>, you will be asked whether you wish to have a new file or add loaded data to a pre-existing file. If you enter the letter a, new data will be appended to the data already in the computer.

2. BEGIN A NEW DATA SET. This option, selected by pressing <F2>, is identical to option <F3> except for the fact that the memory is reset erasing all previous entries.

3. ADD TO AN OLD DATA SET. When <F3> (or <F2>) is pressed, the computer prompts for entries from the questionnaire. You are prompted for each of forty one entries into the questionnaires.

Notice that the numbers on the questionnaires which correspond to the 41 entries will vary but you will be prompted with the number that corresponds to the number on the questionnaire. When the prompt appears "Is this right?", CAREFULLY check to insure that you entered the data accurately. The only way to correct the data after you enter the letter y is to load the data on a word processor, count over to the errant number, and being careful to enter the number in the same space, replace it with the correct number. To avoid this complexity, be careful to enter the data accurately. If you press the letter n, you will be able to go back and reenter the data from the form on which you made your mistake.

You are then asked if you want to enter another. Pressing the letter y will take you back through the data entry sequence while pressing the letter n will take you back to the main menu.

4. COMPILE THE DATA. An example of the report produced by the compile data option is attached. When you press <F4>, you will be prompted for the date and a title. These will appear at the top of your report. Retain the report for entry using the MUCAPE program.

5. STORE A DATA SET. You will be asked to assign the data a name. Be careful about the name you select. The name can be no more than 10 characters long. If the name you enter is longer than ten characters, additional characters will be truncated. You will want to remember the name for later retrieval. Be careful not to copy a file over another student interview file you want to keep. The program adds "-att" to the end of each program name which will make it unlikely that you would write over anything but another file from this program. After storing this data, you may then reload it, add additional data that is collected and generate new and additional reports.

7. FINISH. Make sure you have stored all data before exiting the program. Otherwise all new entries will be lost.

FILE NONAME (CREATION DATE = 08/12/85)

********RELIABILITY ANALYSIS FOR SCALE (GTA)**********

N OF CASES = 279.0

STATISTICS FOR	MEAN	VARIANCE	STD DEV	N VARIABLES
SCALE	82.55914	205.82293	14.34653	30

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
A1	80.88172	192.88144	0.27285	0.24641	0.81126
A2	81.43728	211.32489	-0.22049	0.25144	0.82586
A3	80.55556	194.65068	0.32783	0.23726	0.80867
A4	78.83943	192.53441	0.35288	0.28789	0.80762
A5	79.96774	184.76514	0.52120	0.36161	0.80816
A6	80.21864	184.58152	0.51614	0.40038	0.80828
A7	77.74910	196.54834	0.23664	0.29527	0.81280
A8	80.94857	194.87973	0.27181	0.21924	0.81081
A9	80.13262	201.42488	0.09584	0.13426	0.81692
A10	80.10753	186.82293	0.53315	0.44042	0.80860
A11	80.29032	187.50893	0.47610	0.39124	0.80948
A12	78.88244	199.71620	0.14885	0.19642	0.81556
A13	77.96774	192.18968	0.37395	0.31685	0.80686
A14	78.85735	201.48677	0.09334	0.13943	0.81708
A15	80.70968	192.97656	0.31154	0.26173	0.80926
A16	80.84893	188.48275	0.50585	0.35549	0.80199
A17	80.18638	183.58384	0.56832	0.47286	0.79824
A18	80.11111	192.55955	0.37579	0.26650	0.80686
A19	80.56989	190.03736	0.45086	0.38165	0.80402
A20	80.13620	184.69361	0.51448	0.41298	0.80037
A21	80.07168	185.29708	0.48219	0.51121	0.79819
A22	80.34050	191.87285	0.35480	0.32826	0.80753
A23	80.58423	197.82651	0.23125	0.28514	0.81194
A24	78.85305	205.00351	-0.01292	0.17154	0.82034
A25	80.64516	196.03551	0.24774	0.18584	0.81162
A26	80.42652	190.74908	0.37458	0.29293	0.80667
A27	78.15054	200.01323	0.12898	0.20898	0.81403
A28	80.68932	199.80806	0.16782	0.18556	0.81397
A29	78.08244	193.91045	0.33181	0.43997	0.80847
A30	80.22939	192.90483	0.37046	0.26087	0.80709

FILE NONAME (CREATION DATE = 08/12/85)

**********RELIABILITY ANALYSIS FOR SCALE (GTA)**********

RELIABILITY COEFFICIENTS 30 ITEMS

ALPHA = 0.81404 STANDARDIZED ITEM ALPHA = 0.80627

APPENDIX I

PROCEDURES FOR CONVERSION FROM OPSCAN FILE TO ATT PROGRAM FILE

USING OPTICAL SCANNING FOR ATTITUDE SURVEY

THE FOLLOWING STEPS ARE NECESSARY WHEN REORGANIZING ATTITUDE SURVEY DATA FOR COMPILATION USING THE ATTITUDE PROGRAM ON THE COMMODORE 64. 1) BOTH TEACHER AND STUDENT OPSCAN DATA MUST BE REFORMATED; 2) THE DATA MUST BE CONVERTED SO THAT OPSCAN NUMBERS AND CODES ARE EQUIVALENT TO THOSE WHICH WOULD BE INPUT DIRECTLY. STEP ONE IS COMPLETED USING THE TWO PROGRAMS WHICH FOLLOW. STEP TWO IS COMPLETE BY RUNNING THE PROGRAM "ATT.CONV". WHEN THE ATTITUDE CONVERSION PROGRAM IS RUN, THE OUTPUT FILE WILL HAVE "-ATT" ATTACHED TO IT, THUS MAKING IT READY FOR LOADING INTO THE ATTITUDE PROGRAM FOR COMPILATION OF A REPORT.

REORGANIZING TEACHER ATTITUDE QUESTIONNAIRE FOR USE WITH CBM 64 PROGRAM

PRIME FTN77 (FORTRAN) PROGRAM

```
*** T.ATT.REORG
*** REORGANIZES OPSCAN DATA WITH 1ST COLUMN
*** INDICATING GIFTED (0) OR NOT (9)
*** AND 41 GIFTED AND SCHOOLING ATTITUDE RESPONSES
*** PLACE THE WORD END AT THE END OF EACH FILE
*** CHANGE FILE NAMES IN OPEN STATEMENTS
      CHARACTER*129 SCAN1
      CHARACTER*72 L1,L2,SC
      OPEN (6, FILE='R-TA',STATUS = 'NEW', ERR =999)
      OPEN (5, FILE='ROWAN.TCHR',STATUS = 'OLD',RECL=129,ERR=998)
5     READ (5,100) SCAN1
      SC= SCAN1 (:3)
      IF (SC.EQ.'END') GO TO 900
      L1 = SCAN1 (22:22)
      L2 = SCAN1 (67:107)
      WRITE(6,200) L1,L2
100   FORMAT (A129)
200   FORMAT (A1,A41)
      GO TO 5
998   PRINT 800, 'FAILURE 5'
      GO TO 900
999   PRINT 800, 'FAILURE 6'
800   FORMAT (A9,3X,I4)
900   CLOSE (5)
      CLOSE (6)
      STOP
      END
.BOTTOM.
```

REORGANIZING STUDENT ATTITUDE QUESTIONNAIRE FOR USE WITH CBM 64 PROGRAM

PRIME FTN77 (FORTRAN) PROGRAM

```
.TOP.
*** S.ATT.REORG
*** OUTPUT OF ATTITUDES ON GIFTED AND SCHOOLING
*** COLUMN 1 IS GIFTED (0) OR NON (9)
*** COLUMN 2 - 42 ARE ATTITUDE RESPONSES
***ENTER INPUT AND OUTPUT FILE
*** WRITE END AT THE END OF INPUT FILE
      CHARACTER*186 SCAN1
      CHARACTER*72 L1,L2,SC
      OPEN (6, FILE='R-SA',STATUS = 'NEW', ERR =999)
      OPEN (5, FILE='ROWAN.STD',STATUS = 'OLD',RECL=186,ERR=998)
5     READ (5,100) SCAN1
      SC= SCAN1 (:3)
      IF (SC.EQ.'END') GO TO 900
      L1 = SCAN1 (22:22)
      L2 = SCAN1 (137:)
      WRITE(6,200) L1,L2
100   FORMAT (A186)
200   FORMAT (A1,A41)
      GO TO 5
998   PRINT 800, 'FAILURE 5'
      GO TO 900
999   PRINT 800, 'FAILURE 6'
800   FORMAT (A9,3X,I4)
900   CLOSE (5)
      CLOSE (6)
      STOP
      END
.BOTTOM.
```

APPENDIX J

STAFF EVALUATION INTERVIEW

AND STAFF DATA COMPILATION MANUAL

GIFTED AND TALENTED PROGRAM

STAFF TRAINING AND SUPPORT

INTERVIEW FORM COMPILATION PROGRAM

This program was designed to be an exceedingly simple approach to compiling data gathered using the Gifted and Talented Program Staff Information Interview Form.

To load this program, type;

```
LOAD"STAFF",8
```

When the cursor appears, type;

```
RUN
```

When you press the space bar, the main menu will appear. As with the MUCAPE program, you may now change the screen border by pressing the letter b, the screen background by pressing capital B, and the character color by pressing c.

1. LOAD A DATA SET ALREADY ENTERED. If you have already entered data, you would press <F1>. You are then prompted for the name of the file you wish to load. It is important to note that this program automatically adds "-staff" to the title of any data stored on the disk. When you want to load this data, the computer will add "-staff" to whatever you enter. This decreases the likelihood that files from one program will be confused with files from another.

2. BEGIN A NEW DATA SET. This option, selected by pressing <F2>, is identical to option <F3> except for the fact that the memory is reset erasing all previous entries.

3. ADD TO AN OLD DATA SET. When <F3> (or <F2>) is pressed, the computer prompts for entries from the interview form. Education is figured by simply counting down from the top to the category selected. Enter the values for each of the seventeen questions in sequence. When the prompt appears "Is this right?", CAREFULLY check to insure that you entered the data accurately. The only way to correct the data after you enter the letter y is to load the data on a word processor, count over to the errant number, and being careful to enter the number in the same space, replace it with the correct number. To avoid this complexity, be careful to enter the data accurately. If you press the letter n, you will be able to go back and reenter the

data from the form on which you made your mistake.

You are then asked if you want to enter another. Pressing the letter y will take you back through the data entry sequence while pressing the letter n will take you back to the main menu.

4. COMPILE THE DATA. An example of the report produced by the compile data option is attached. When you press <F4>, you will be prompted for the date and a title. These will appear at the top of your report. The three pieces of data between the two heavy lines represent the three pieces of information to be entered into the program evaluation as assessments of goal attainment. Retain the report for entry using the MUCAPE program.

5. STORE A DATA SET. You will be asked to assign the data a name. Be careful about the name you select. The name can be no more than 10 characters long. If the name you enter is longer than ten characters, additional characters will be truncated. You will want to remember the name for later retrieval. Be careful not to copy a file over another staff file you want to keep. The program adds "-staff" to the end of each program name which will make it unlikely that you would write over anything but another file from this program. After storing this data, you may then reload it, add additional data that is collected and generate new and additional reports.

7. FINISH. Make sure you have stored all data before pressing this key. Otherwise all new entries will be lost.

Gifted and Talented Program
Staff Information Interview Form

1. EDUCATION (check highest level attained)
   - [ ] Less than a Bachelor's degree
   - [ ] Bachelor's degree
   - [ ] Bachelor's degree plus additional credits
   - [ ] Fifth year completion
   - [ ] Fifth year plus.....
   - [ ] Master's degree
   - [ ] Master's degree plus.....
   - [ ] Ph.D.

TRAINING IN GIFTED

Coursework

2. Number of courses specifically designed to deal with G&T _____.
3. Number of credit hours associated with these courses _____.

Workshops

4. Number of workshops attended _____.
5. Number of contact hours associated with workshops _____.

Coursework in the past two years

6. Number of courses specifically designed to deal with G&T _____.
7. Number of credit hours associated with these courses _____.

Workshops in the past two years

8. Number of workshops attended _____.
9. Number of contact hours associated with workshops _____.

EXPERIENCE WITH GIFTED

10. How many years have you been teaching special content for G&T students _____.

11. Estimate, roughly, the percentage of teaching time you allocate to special activities for gifted and talented students during the period specified in item 10_____.

SCHOOL SUPPORT

12. Estimate the percentage of your time which is allocated to gifted and talented programs which reflects an extention of the number of man hours which would otherwise be utilized in teaching students _____.

13. For workshops attended in the past two years, what percentage of expenses were paid for by your school _____.

14. For workshops attended in the past two years, what percentage of the time attended was during hours in which you would typically be in school _____.

15. On the average, how many hours per week do you spend working with gifted students in activities designated for gifted students_____.

16. How many hours per week do you spend preparing for activities designated for gifted students_____.

17. How many of these preparation hours are during actual school time_____.

APPENDIX K

TIME ON GIFTED ACTIVITIES DIARY

ACTIVITY DIARY

Name _____

Teacher [ ] Student [ ]

Week of _____

Enter times in the following format. Three hours and 20 minutes = 3h20m

	Monday	Tuesday	Wednesday	Thursday	Friday
hrs in school					
hrs in G&T					
hours in gifted programming which focus upon;*					
accelerating traditional coursework					
gaining broader knowledge					
problem solving skills					
general creativity					
creative products					
developing effective attitudes					
cultural enrichment					
communication skills/social skills					

*Activities may focus on and count toward more than one of the above categories.

APPENDIX L

STUDENT INVENTORY ON ACTIVITIES AND COUNSELING

MANUAL AND INTERVIEW FORM

GIFTED AND TALENTED PROGRAM

STUDENT INTERVIEW ON ACTIVITIES

AND COUNSELING COMPILATION PROGRAM

This program was designed to be an exceedingly simple approach to compiling data gathered using the Gifted and Talented Program Student Interview on Activities and Counseling.

To load this program, type;

```
LOAD"SIAC",8
```

When the cursor appears, type;

```
RUN
```

When you press the space bar, the main menu will appear. As with the MUCAPE program, you may now change the screen border by pressing the letter b, the screen background by pressing capital B, and the character color by pressing c.

1. LOAD A DATA SET ALREADY ENTERED. If you have already entered data, you would press <F1>. You are then prompted for the name of the file you wish to load. It is important to note that this program automatically adds "-siac" to the title of any data stored on the disk. When you want to load this data, the computer will add "-siac" to whatever you enter. This decreases the likelihood that files from one program will be confused with files from another program.

2. BEGIN A NEW DATA SET. This option, selected by pressing <F2>, is identical to option <F3> except for the fact that the memory is reset erasing all previous entries.

3. ADD TO AN OLD DATA SET. When <F3> (or <F2>) is pressed, the computer prompts for entries from the interview form. You are prompted for each of the twelve entries into the data form. When the prompt appears "Is this right?",CAREFULLY check to insure that you entered the data accurately. The only way to correct the data after you enter the letter y is to load the data on a word processor, count over to the errant number, and being careful to enter the number in the same space, replace it with the correct number. To avoid this complexity, be careful to enter the data accurately. If you press the letter n, you will be able to go back and reenter the data from the form on which you made your mistake.

You are then asked if you want to enter another. Pressing the letter y will take you back through the data entry sequence while pressing the letter n will take you back to the main menu.

4. COMPILE THE DATA. An example of the report produced by the compile data option is attached. When you press <F4>, you will be prompted for the date and a title. These will appear at the top of your report. Retain the report for entry using the MUCAPE program.

5. STORE A DATA SET. You will be asked to assign the data a name. Be careful about the name you select. The name can be no more than 10 characters long. If the name you enter is longer than ten characters, additional characters will be truncated. You will want to remember the name for later retrieval. Be careful not to copy a file over another student interview file you want to keep. The program adds "-siac" to the end of each program name which will make it unlikely that you would write over anything but another file from this program. After storing this data, you may then reload it, add additional data that is collected and generate new and additional reports.

7. FINISH. Make sure you have stored all data before exiting the program. Otherwise all new entries will be lost.

STUDENT INTERVIEW

ACTIVITIES

_____ Percentage of total school time in gifted programs.

Percentage of time in gifted programming which focuses upon;*

_____ accelerating traditional coursework

_____ gaining broader knowledge

_____ problem solving skills

_____ general creativity

_____ creative products

_____ developing effective attitudes

_____ cultural enrichment

_____ communication skills/social skills

* note total will be greater than 100 since some activities focus on more than one.

COUNSELING

I believe that the quality of vocational and career counseling I have recieved is;

[] excellent
[] good
[] adequate
[] mildly inadequate
[] very inadequate

I believe that the quality of educational counseling I have recieved is;

[] excellent
[] good
[] adequate
[] mildly inadequate
[] very inadequate

I believe that the quality of personal and social counseling I have received is;

[] excellent
[] good
[] adequate
[] mildly inadequate
[] very inadequate

APPENDIX M

INVENTORY FOR PARENTS OF GIFTED STUDENTS

QUESTIONNAIRE INSTRUCTIONS

PLEASE READ THIS CAREFULLY

1. Do not answer on the questionnaires. All responses should be circled on the attached answer sheet.

2. The answer sheet is cut in half so that the husband and wife may choose to complete the questionnaires independently, expressing their opinion without review by the spouse. This is your choice.

3. Using the same questionnaire but different answer sheets, each parent should respond to the questionnaire. Then place only the answer sheets in the return envelope. Seal the envelope and mail it.

4. If one parent is absent, simply check the parent absent box and return it with your answer sheet.

5. If you have any questions, please call;

John Klein, Ph.D.
783-2530

GIFTED STUDENT PARENT QUESTIONNAIRE

SA = strongly agree, A = agree somewhat, ? = not sure if I agree or disagree, D = disagree somewhat, SD = strongly disagree.

1 2 3 4 5

SA A ? D SD 1. I generally feel that I am well informed by the school regarding special activities and opportunities for gifted children.

SA A ? D SD 2. I have had sufficient opportunities for input into the activities for gifted and talented students.

SA A ? D SD 3. I have found resistance in my school district to expressing my opinions regarding programming for gifted students

SA A ? D SD 4. The school rarely takes sufficient initiative in getting information about the gifted programs to the parents of gifted students.

SA A ? D SD 5. It is alright to have after school programs for gifted students, but these students should not be released from their regular classroom responsibilities.

SA A ? D SD 6. The mind that can produce a quick answer to almost every question may yet need training toward self-criticism and rethinking of first impulses.

SA A ? D SD 7. Suppression of intellectual controversy and unresolved differences of opinion in the classroom is the responsibility of the teacher.

SA A ? D SD 8. It is appropriate to spend substantial amounts of additional money to provide special educational experiences for gifted and talented students.

SA A ? D SD 9. It is not fair that gifted children are offered special educational opportunities merely because of their high intelligence and achievement.

SA A ? D SD 10. High intelligence is a characteristic which interferes with common sense.

SA A ? D SD 11. I would prefer that my own children be very mentally gifted.

SA A ? D SD 12. It isn't fair not to require certain assignments of gifted children merely because achievement tests indicate they have already mastered the content.

SA A ? D SD 13. Teachers should have students write papers on topics that are chosen by the teacher.

SA A ? D SD 14. Very bright children are usually impractical.

SA A ? D SD 15. Superior intellectual ability commonly leads to emotional instability.

1 2 3 4 5

SA A ? D SD 16. Gifted and talented programs should be funded in the same manner that funds are allocated to handicapped learners.

SA A ? D SD 17. Special programs for the gifted are necessary to prevent the restriction of the gifted child's learning process.

SA A ? D SD 18. Creativity in children should be encouraged, even though it may be at the expense of classroom order and discipline at times.

SA A ? D SD 19. For the most part, gifted students merely need to get more of what average students are learning.

SA A ? D SD 20. It is undemocratic to provide gifted children with educational situations which differ from those of the regular school program.

SA A ? D SD 21. Very intelligent children are generally less friendly and warm than other children.

SA A ? D SD 22. I would rather have children who are athletically gifted than mentally gifted.

SA A ? D SD 23. The gifted can develop their potential in a conventional program; special programs should focus on those who need help in mastering the basics.

SA A ? D SD 24. I believe a teacher should not give a student credit for an answer which was a correct response to the test question, but was not the answer the teacher was seeking based upon what had been taught.

SA A ? D SD 25. Intellectually gifted children are generally less happy than average children.

SA A ? D SD 26. A teacher should try to get all students to solve math problems by the same method, even if the student's own method works.

SA A ? D SD 27. Children frequently appear to be gifted because they develop one capability at the expense of another.

SA A ? D SD 28. Gifted children, on the average, are superior in physical, emotional, and social adjustment.

SA A ? D SD 29. Gifted children should always remain with their chronological age group for the sake of emotional adjustment.

SA A ? D SD 30. If it's good for the gifted, it's good for all.

SA A ? D SD 31. Gifted students are frequently more motivated to learn than average students.

1 2 3 4 5

SA A ? D SD 32. Gifted students are often responsible for feelings of inadequacy among average students.

SA A ? D SD 33. The money that taxpayers pay for special programs for the gifted will be returned in the impact well educated, gifted individuals have on society.

SA A ? D SD 34. When a gifted student tries to tell the class how a concept in one class is almost the same as a similar concept in another class, the teacher should stop the student in order to prevent confusion in the class.

SA A ? D SD 35. Students succeed if they act as if they like the teacher.

SA A ? D SD 36. Students succeed if they know how to impress the right people.

SA A ? D SD 37. Students succeed if they know how to take tests.

SA A ? D SD 38. Students succeed if they work really hard.

SA A ? D SD 39. Students succeed if they are intelligent or talented.

SA A ? D SD 40. Students succeed if they are interested in learning.

SA A ? D SD 41. Students succeed if they have the opportunity to attend an excellent school system.

SA A ? D SD 42. It is very important for schools to prepare us for jobs that will give us a comfortable living.

SA A ? D SD 43. It is very important for schools to prepare us for jobs that will give us long vacations and money to travel.

SA A ? D SD 44. It is very important for schools to prepare use for jobs that will give us plenty of free time.

SA A ? D SD 45. It is very important for schools to give us the skills that will get us top jobs with high status.

46. I have the following suggestion(s) for improving the county program for gifted and talented students.

ANSWER SHEET

____ code

[] Mother
[] Father

[] Parent unavailable?

____ age of child
[] male child [] female child

SA = strongly agree
A = agree
? = not sure if I agree
D = disagree somewhat
SD = strongly disagree.

1. SA A ? D SD
2. SA A ? D SD
3. SA A ? D SD
4. SA A ? D SD
5. SA A ? D SD
6. SA A ? D SD
7. SA A ? D SD
8. SA A ? D SD
9. SA A ? D SD
10. SA A ? D SD
11. SA A ? D SD
12. SA A ? D SD
13. SA A ? D SD
14. SA A ? D SD
15. SA A ? D SD
16. SA A ? D SD
17. SA A ? D SD
18. SA A ? D SD
19. SA A ? D SD
20. SA A ? D SD
21. SA A ? D SD
22. SA A ? D SD
23. SA A ? D SD
24. SA A ? D SD
25. SA A ? D SD
26. SA A ? D SD
27. SA A ? D SD
28. SA A ? D SD
29. SA A ? D SD
30. SA A ? D SD
31. SA A ? D SD
32. SA A ? D SD
36. SA A ? D SD
37. SA A ? D SD
38. SA A ? D SD
39. SA A ? D SD
40. SA A ? D SD
41. SA A ? D SD
42. SA A ? D SD
43. SA A ? D SD
44. SA A ? D SD
45. SA A ? D SD

46. Answer on the back.

ANSWER SHEET

____ code

[] Mother
[] Father

[] Parent unavailable?

____ age of child
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29. SA A ? D SD
30. SA A ? D SD
31. SA A ? D SD
32. SA A ? D SD
36. SA A ? D SD
37. SA A ? D SD
38. SA A ? D SD
39. SA A ? D SD
40. SA A ? D SD
41. SA A ? D SD
42. SA A ? D SD

APPENDIX N

MASTERY OF SPECIFIC CONTENT DOMAINS REPORT FORM

MASTERY OF SPECIFIC CONTENT DOMAINS

The method we are currently using to evaluate gifted and talented programs in your schools permits the use of subjective estimates to augment or replace objective assessments. In this evaluation project, we will be collecting subjective estimates in areas where time constraints preclude the collection of objective assessments. Mastery of specific content domains is one such area.

A specific content domain refers to a activities in which the student studies a specific area of content not within the common curriculm; e.g. computer skills, a language, Greek mythology, calculus, etc.

Mastery refers to the following. First, assume that you had set up criteria associated with a specific content domain prior to study of that content domain; these criteria appropriate to the study time interval and sufficiently challenging to the gifted child. Then assess the portion of those criteria that have been mastered by the student.

Please follow these steps in estimating mastery of specific content domains for students. Record your responses on the back of this sheet, attaching additional sheets if necessary.

Teacher's Name:_____

1) What is the total number of students in the Gifted & Talented Program who participate in G&T activities supervised by you.
_____

2) What number of these students have participated in activities designed to achieve mastery of a specific content domain._____

3) On page two in column one, list all students who have participated in activities designed to achieve mastery of a specific content domain.

4) In column two, specify the content domain each individual studied.

5) In column three, what portion of the criteria for mastery of the specific content domain were mastered by the individual. Your criteria may or may not have been well formulated while the activity was underway. For the sake of this estimation, consider a set of hypothetical criteria appropriate to the time interval and sufficiently challenging to the gifted child.

Name	Content Domain	Percent Mastery

Gifted and Talented Program Evaluation

Computer Program Errata

STAFF:

Staff Training Report: As is, inaccurately reports percent hours for preparation as zero regardless of hours allowed.

Correction: Load the program by entering the following statement while the program is in the CBM disk drive.

```
LOAD "STAFF",8
```

Wait until the loading process has begun.

Type;

```
LIST 4032
```

This line should appear: 4032 P(3) = P(3) + PA/N

Type exactly as it appears.;

```
4032 P(3) = P(3) + PA*100/N
```

Save the corrected program by typing;

```
SAVE "@0:STAFF",8
```

*Note: If you need to change more than one copy; simply insert each new copy and reexecute the save command. This can be done most easily by moving the cursor back up to the save line, putting in the new disk to be corrected, and pressing return.